



GOLMAN'S RURAL WORLD

DEVOTED TO AGRICULTURE HORTICULTURE HORSES CATTLE SHEEP SWINE ETC.

Established 1848.

ST. LOUIS, MO., WEDNESDAY, APRIL 18, 1900.

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GOLMAN'S RURAL WORLD

NORMAN J. GOLMAN, } Editors.
LEVI CHUBBUCK. }

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Letters should be addressed to GOLMAN'S RURAL WORLD, 721 Olive St., St. Louis, Mo. Advertising rates furnished on application. Advertisers will find the RURAL WORLD one of the best advertising mediums of its class in the United States.

In a novel lately published and widely read, the leading character is made to say "He taught me the folly of plowing with a fluke." The RURAL WORLD would like to know who among its readers can give the name of the book in which the remark occurs, and it would also like to have any of its readers who can do so, explain "plowing with a fluke," and tell wherein such plowing was folly.

Your paper is very interesting and as I intend to go on the farm again this summer, I will want it. The agricultural papers published in St. Louis are no good. They are devoted to horse racing and politics. I will never regret the day I met "Orange Judd Farmer."—L. A. Mudd, Missouri.

The RURAL WORLD is glad to know that a Missourian appreciates so good a farm paper as is the "Orange Judd Farmer," and appreciates the courtesy (?) of the "Farmer" in publishing so kindly (?) a comment as that of Mr. Mudd regarding agricultural papers published in St. Louis.

MY COUNTRY.

What a glorious land is this which we are proud to call ours—glorious in its history, grand in its present state of advancement and beyond the power of human imagination to measure what it shall be. That the good things were scattered widely and with a free hand is evident when one reads the letters published in the RURAL WORLD. From Florida to Alaska is a far cry, but from these two extremes, and from many points between, come letters to the RURAL WORLD, each telling of the beauties and advantages of the locality from which it comes. We are glad to see this evidence of pride in home. It is a good thing to encourage and will contribute greatly to human well-being and happiness.

HOW THEY FIGHT THE GROUT BILL.

How only are those who are fighting the "Grout Bill" that is now before Congress. This bill, as our readers know, is one providing for a change in the national oleomargarine law, by which these imitation butter products are to be taxed 10 cents per pound when colored so as to resemble butter, but only 1/4 of a cent a pound when put on the market uncolored. Of course the oleo makers are fighting the bill with all the power of their millions of capital. Keeping themselves in the background, they are parading through labor organizations (?) the arguments of the chemists who, they say, have declared oleo to be a wholesome article of food, and that its cheapness keeps down the price of butter. But the "Grout Bill" reduces the tax on this "wholesome article of food" from two cents to 1/4 of a cent per pound, provided the manufacturers will put it on the market in such guise that he who buys this "wholesome article of food" may buy it knowingly and be in a position to demand that it be sold to him at oleo prices and not at butter prices, as is done when it is made to resemble butter. The purpose of the bill is to prevent the makers of an imitation food product from driving a genuine article from the market, and by this means give the oleo makers a monopoly of the business. Note Congressmen Conney's position, as set forth on page two of this issue.

TO THE MANOR BORN.

An occupation in which one is engaged for daily bread, but of which one is ashamed because of its questionable character, even though such business or employment was bequeathed by father to son, has lost out of it the possibility of enjoying the one conducting it. The son of the farmer need never blush to own his father's occupation, but the rather to glory in it.

It is with a pleasure that is an intellectual gratification above "boshy" sentiment, that we hear a farmer boast of an ancestry of agriculturists from "way back." To the thinking man who can recognize the truth that no one man knows all and that being born in a farm home does not necessarily mean knowing all about farming, the inheritance of an agricultural lineage without doubt is a veritable blessing. But the logic that my grandfather and father were farmers and I was raised on a farm and consequently know how to farm will be exploded, if failures attend one's farming operations year after year. It takes knowledge of farming in its varied aspects to successfully farm.

When a man in the city grows weary of incessant toil and the grind of getting to work at a fixed hour and of being unable to leave until a warning signal is given—and when this machine-like life wears nerves threadbare, and he seeks re-

SPECIAL OFFER.

While the regular subscription price for the RURAL WORLD will remain at one dollar per year, yet, in order to more than double our present circulation for the year 1900 we have determined for a brief period to allow all of our present subscribers to renew their subscriptions by sending the name of a NEW subscriber with their own for one dollar—thus getting two papers for one year for only one dollar. In all cases, however, the additional name or names must be new subscribers. Renewals will not be received at fifty cents, except when accompanied by a new subscriber. Two NEW subscribers at the same time, however, will be received for one year for one dollar. New subscribers can also send additional new subscribers on the same terms. This is below the actual cost of the paper. But so anxious are we to have the RURAL WORLD enter tens of thousands of new homes that we are willing to make this low offer. We know the RURAL WORLD is doing a grand work in uplifting the farmer, and we are more than anxious that its benefits shall be extended to the widest limits, hence this special offer. We hope to have 100,000 subscribers on our list for 1900.

spite in, perhaps, harder toll on the farm, but with hopes to breathe the air of liberty of thought and action, he is thoroughly conscious that he doesn't know about farming. His business life in the city has taught him that there is no success without knowledge. Such a man calls on the editor of an agricultural paper and the course of agricultural catechism through which said editor is put would cause some farmers to smile and smile not only broadly but loudly. The questions are both pertinent and intelligent. If some special line of farming is being considered, men who are thought to be making money in such business are visited. Their advice is sought and their methods examined. Books are procured, treating of the subject. Every available means to become enlightened is made use of. This man knows he was not to the manor born and he must study farming if he would farm.

Frequently the city-bred man astonishes old farmers by the success which attends his farming operations. If he fails, the knowing winks, ominous nods, and whispers of pity all testify that the failure was due to the fact that the man wasn't born and brought up a farmer. They forget about those farmers along the creek or up on the hillsides who have been farmers from "way back" and whose fences are more down than up, whose dwarf (?) varieties of corn and tumbledown barns and shanties and orchards have broken lack of culture and the shade of a people who possess wealth, the means of education and the institutions of religion. A great and free people, distinguished alike for wealth and refinement, for their attainments in high art, for their learned men and universities, and though "last, not least," for an admirable system of free schools, now inhabit peaceful homes and are foremost in the enjoyments of civilized life. In a territory which has been reclaimed, and is kept free from the peril of storm and flood by the most remarkable industry the world has ever seen.

LEROY CARDNER.
National Military Home, Kansas.

THIS, THAT AND THE OTHER.

Editor RURAL WORLD: H. H. Brydon, in RURAL WORLD, page 97, wants some one to suggest means of checking Hessian fly in wheat. It can't be done. Mr. Brydon. The only plan is to sow the wheat so late in the fall that the mature flies have no chance of depositing their eggs in the young plants. If we get some sharp frosts about April 20 to 25, to destroy the insects as they mature, ready to lay eggs for the "spring brood," we may escape serious damage, but with continued warm weather during the latter half of April we may expect a short crop of wheat in infested regions.

We all enjoy LeRoy Cardner's letters and hope they will be continued while he is resting at the Leavenworth Military Home.

"Right and Wrong Economy," page 97, suits me to a dot. My binder has cut eleven crops and seems good for half as many more, but it was carefully housed when not at work. One neighbor has had three machines since I bought mine. Prof. Stedman, page 98, makes us wish that we had had a chance to learn more of nature and her works in our own school days. It is wonderful to note how quickly a child will learn the natural sciences. It seems to me that children learn much easier than grown people. And a very little time each school day spent on botany, entomology or some like study would be of vastly more benefit than the same time spent on the map of Senegambia, or in computing the difference in time between Lique and Bundelcombe. It is very strange to see ignorant people laugh at "bug men" and "weed men." These same ignoramuses don't know that such men as themselves are a "log in the way of the engine of progress." All honor to the boy or man who, in spite of the jeers of his fellows, seeks to better himself by learning about the living, moving, growing things in nature.

Judge Miller, on page 107, says he "does not love express companies." I don't like the way some railroads transact business. I sent for a sack of seed barley about March 11, and it was shipped three days after the order. On April 5 it came to its destination; it weighed 198 pounds, had been carried 200 miles, and the bill was

still lower than the waters of the adjacent sea; swamps and lakes abounded on every side; the air was damp and the winters cold; yet here a hardy, brave, noble race of men was preparing to battle for their rights and to assert with their blood the great principles of civil and religious liberty. The struggle was long, for it was maintained against the most powerful nation in the world; but it resulted in securing freedom for herself, and in promoting by her example and influence the cause of human progress. She became a power among the European nations, planted her colonies in the four quarters of the globe, surpassed all others in the extent and richness of her commerce, became an asylum for persecuted Protestants, founded libraries and universities with munificent endowments, and gave to the world an illustrious succession of wise and learned men.

Holland has a special interest in the minds of American people. Many of its citizens, at an early day, emigrated to this country, and their descendants were distinguished for high qualities of character and became useful members of our common fraternity. Not a few of the best families in the state of New York are proud to trace their descent from Holland. She was the first nation that achieved for herself civil and religious liberty, and thus she became an example and an inspiration. She afforded an asylum for many years to the Puritan settlers of New England, who they formed a higher appreciation of liberty, of education, of freedom of thought and speech, and of those seminal principles which underlie all our institutions. Their residence in Holland assisted in preparing them for the great part they were to act in laying the foundations of empire in a strange land. Not the least valuable of the forms and institutions for which they were indebted to their residence in that land is the division of the country into townships, and committing to towns the internal regulations of their own affairs; the appointment of select men as municipal officers; the registry of deeds, the advantages of which over the English system are incalculable; and the establishment of highways, and the erection of houses and farm buildings along the line of traveled roads.

But another reason is still more important to farmers. The history of Holland shows what can be accomplished in agricultural improvements by industry and perseverance. Many thousands of acres of what was once an impassable morass have been reclaimed, and made the abode of a people who possess wealth, the means of education and the institutions of religion. A great and free people, distinguished alike for wealth and refinement, for their attainments in high art, for their learned men and universities, and though "last, not least," for an admirable system of free schools, now inhabit peaceful homes and are foremost in the enjoyments of civilized life. In a territory which has been reclaimed, and is kept free from the peril of storm and flood by the most remarkable industry the world has ever seen.

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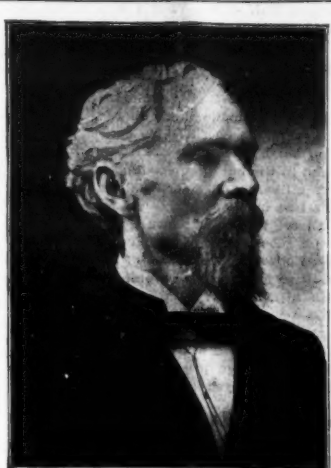
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DAVID A. WATTS.

It is with deep sorrow that we chronicle the death of Mr. D. A. Watts, our field editor. On Saturday, April 7, while at his home in Lebanon, Ill., he was kicked in the abdomen by a horse, and death ensued on Tuesday, April 10, his body being consigned to earth on Thursday, April 12. This announcement will be sad news to thousands of RURAL WORLD readers with whom Mr. Watts had become personally acquainted during the years he had been connected with this paper. For six years Mr. Watts had been with the RURAL WORLD as a "field man," and in that capacity had come into a relation with its readers such as is not enjoyed by any other member of its staff; he had made their personal acquaintance, talked with them face to face, taken them by the hand, visited them in their homes and broken bread at their tables. Such relations must have developed warm friendship, and that Mr. Watts was worthy such friendship none who knew him at all would for an instant question.

D. A. Watts was a gentleman—gentle in speech and manner, always kind and courteous and yet so truly honest and conscientious that there could not be with him a suspicion of moral compromise. Such men cannot live on earth without being a blessing to the world. And in this thought Mr. Watts' immediate family, though scarcely to be reconciled to the loss of husband and father, will find comfort. The RURAL WORLD staff deplore the loss of an associate in whom all had the highest esteem; whose integrity, industry and loyalty are an inspiration; whose Christian character will be a comforting heritage to his family and a beautiful example to all who knew him.

1/10. A month ago I shipped 800 pounds of oats 20 miles for 30 cents. Of course the amount of overcharge is too small to hunt up and recover, but it was a clear steal.

The last note on the first page of the RURAL WORLD for April 4 is worthy of notice. Hands are getting harder to find and harder to hold every year. A neighbor has had seven hands to leave him in the past year. Some got so careless that he was compelled to send them away; one left without giving any reason; two went to town, got drunk and into trouble so they had to go into other parts. The plan of holding back part of the wages is, to my mind, the only plan which makes it to the hand's interest to serve out the whole of his time. It is very annoying to have a man leave just in a busy time; and if he knew that he was leaving money behind he would not go.

We now have—April 8—our oats, five acres, sown and coming up. Tobacco plants are coming up in rows out of 21 of our plowing done, half an acre of potatoes planted and some garden made. Ground is getting rather dry to plow well, but we have the most of our own done. To-morrow we begin to rake up the manure about the yards and get it ready for hauling out. Wheat is looking better, but has a great deal of fly in it.

C. D. LYON.

BROWN CO., OHIO.

SPRING DAYS AT SEVEN PINES.

Editor RURAL WORLD: The month of March gave a record of a falling off in precipitation, the figure being 1.43 in an average of 2.36. Rains were scattered and light. The all-day sleet of the 5th gave 3.4 in the standing of a 1.06. Still with this deficiency for the month, we are running ahead on averages for the year. One good result of big moisture absence is the dry condition of the land, and the good roads in the district. The question of good highways is positively and practically settled by absence of rainfall.

Some time last year we were talking of good meat on the farm, and I advanced the declaration that the common farmer cannot compete with the great Hammond, Armour, Cudahy and other meat companies, and suggested that the farmer should sell his hogs and place the money with a good groceryman who would furnish meat whenever demanded by the farmer. I yet believe that the plan would prove satisfactory, and would place the farmer in a line of economy where the family would have good, sweet meat. Mr. E. B. Morgan, of Iroquois Co., Ill., questioned my plan, and offered to send a sample of his home-cured bacon. All

right, Mr. Morgan, I may call on you for a liberal "chunk" of sweet bacon some time during the summer. A few farmers have the science of keeping meat fresh and sweet. I used to dine at a farm where the careful housewife preserved the meat in earthen jars, placing the meat down in sections and then filling up the jar with melted lard until the meat was entirely covered. This was an all-right process, and the plan worked to a charm in preserving the meat sweet and very toothsome.

A mechanic of our county has invented and patented a gate which enables the driver to open and close it without the trouble of getting out of his wagon. There is nothing particularly new about such a thing, as a dozen gates, or perhaps a hundred along the same lines have been approved by the Government and thrown open to the public. The gate in notice is so simple in its make-up and workings that it recommends itself. The average patent gate after a year or so of poor service becomes proper material for kindling wood.

The double-edged sword on the farm is doing effective work in our county this spring, dividing as it does farmers into two classes: Those who buy and those who sell. Those who are compelled to buy are in the majority, and they find that the sword cuts pretty severely when corn is worth 25 to 30 cents per bushel. Seed corn will be somewhat scarce, as a large part of the crop was late and received severe treatment by the cold weather of early September.

On the last day of March I observed several representatives of migratory birds, such as purple martins, kingfishers, chickadees and other kinds. Larks arrived fairly early. I sometimes wonder how it is that the sensitive little hummingbird remains so late in autumn, when other birds much more rugged have been gone south a month or longer. The little hummers will remain with us until early October, and then they will suddenly disappear upon swift wings. Their flight must be even swifter than the retreat of the Philippians.

Think I will write a few sketches for the Home Department one of these days. We may as well be friendly and have a few social visits. How would it do for the bachelor at Seven Pines to relate some of his achievements in cooking?

Clark Co., Mo. JASPER BLINES.

COW PEAS IN NORTHEAST MISSOURI.

Editor RURAL WORLD: As cow peas seem to be taking the day at present I will give my experience with them. I have grown them in a small way for three or four years, and am getting to like them very much. Having a patch of ground so completely worn out that clover or anything else, except rat tail or buckthorn, refused to grow on it, I concluded last spring to put it in cow peas. I plowed the ground and planted it about June 20. To the two acres I used one bushel of seed, planting with corn drill straddling the rows. I never did anything to them after planting, yet they made a splendid growth. About September 10 we commenced picking ripe peas and picked about eleven bushels, only picking over a little more than half the patch. The rest I mowed with all the peas on and made into hay, getting about a ton and a half of excellent cow feed.

I expected to plow under the vines I left about, but the September freeze killed them before I got it done, so the cows were permitted to clean them up. The last two weeks they even pulled and ate the stubble the mowers left. Nor is this all; the ground shows unmistakable signs of improvement, many of the roots containing the nodules so much spoken of. I expect to grow more of them this year and would recommend them to any having worn-out land. My peas are the Whippoorwill variety.

THOS. GLENDENING.

Marion Co., Mo.

A LETTER FROM ALASKA.

Editor RURAL WORLD: Don't think because I am in Alaska that I am an Esquimo, for I was born and raised in good, old St. Louis, Mo.

Most of the readers will think that we are having very cold weather, but such is not the case. We are having spring now and the buds are coming forth. Our coldest weather this winter was when the mercury registered 8 degrees below zero and we had two feet of snow.

I have been here since 1897 and have grown with the town. This is a seaport, and ships of any size can come up. We are 150 miles off the coast, up what is called Linn Canal. I have nothing to write about farming, as that is out of the question here as this is a very mountainous country. What few little valleys there are have very little soil. This town can boast of the first and only railroad in Alaska. When one rides on it, he realizes the fact, as he has to pay 25 cents per mile and 5 cents per pound for freight for a distance of 40 miles, as that is as far as the road is completed. When I first came here, there were 200 pack horses on the trail, but now the pack horse is a matter of the past. If any of your readers desires to know more of this part of the world, I will gladly correspond with them. J. M. MURPHY.
Skagway, Alaska.

NEW MEXICO LETTER.

Editor RURAL WORLD: The Peccos country this year promises a good income for its farmers. The past year many lines of agricultural efforts met with little success as they did everywhere else in the Southwest, owing mainly to the hottest, driest summer ever known. Things are somewhat different this far this year and the crops look better and the condition of the soil is better.

The fruit growers have been watching the skies closely for that killing frost that now and then comes in the valley about April 1, but they are now sleeping calmly as the frost failed to materialize, and the buds and blossoms are still in evidence, fragrant and thrifty. The prices received for peaches last year will hardly be realized this year as the crop will be simply enormous. Last year the orchardists got five cents a pound for their fruit delivered at the train. This was owing to a dearth of peaches in Texas and Colorado. This year they will possibly get about four cents a pound, but when one considers the tons of fruit that will leave the valley for the north and east, if nothing intervenes to prevent the proper ripening of the crop, it will be seen that four cents will leave a large margin of profit for the growers.

GEO. H. HUTCHINS.

Carlsbad, N. M.

GROWING BORGHUM.

Editor RURAL WORLD: Let me say first, though not boasting, that my great-grandmother planted the first sorghum seed that was ever planted west of the Ohio River, and made sorghum in kettles sometime in the early forties. I, too, have grown and made sorghum, and I find the land that it grows on has more to do with the quality, appearance and taste than anything that can be put in to clarify or purify. First do not plant it on manured ground, or it will be liable to be salty in taste and dark in color. Sandy land is good, white oak land is fair; but never plant on land where there is any alkali, or all the chemicals on earth will not make the sorghum unpalatable good. I have tried and know.

Plant your cane in the same place from year to year and the sorghum will get clearer and better every year. I made for a neighbor for four successive years who had grown his cane all these years on the same plot, and each year his sorghum was clearer and better than the previous year's make. He said that he had grown cane on that patch for seven years. He hasn't put any fertilizer or manure on the land and the cane last year was of as fine growth as one could wish to have. In order to make good sorghum, it must be made quickly. The longer it is boiled the darker it will be. I claim, after the years' experience, that to filter the juice, so as to get the vegetable matter out, instead of boiling it out, is the better way.

Barton Co., Mo. J. R. MATHEWS.

A HOME AND OUT OF DEBT.

Editor RURAL WORLD: I will endeavor to give the readers of the grand old RURAL WORLD a few items and a pen picture of our humble little Colorado home and how we managed to get it. We came to this Sunflower Valley March 1, 1892, and rented a farm for which we paid \$20 cash rent. We continued renting until January 1, 1896. We had to pay such high rents that we did not make very much farming, so we concluded to stop renting and establish a home for ourselves. During the four years of renting we only saved up \$400. But I had my mind made up to try for a home. Knowing of an 80-acre tract of land for sale, I went and made the owner an offer of \$1,800. He took me up, so I had to raise the other \$1,200. In order to make the purchase, I finally succeeded, getting some of the money for 8 per cent and some for 10 per cent.

The improvements consisted of a two-room adobe house, a cistern partly finished and little or no fencing. With the aid of a good matron we buckled on our bundles, got up and rustled, and on January 1, 1896, we were free from indebtedness. January 1, 1899, found us comfortably settled in a nice, warm five-room cottage, with good outbuildings, good fences all around the farm and a public highway to north, south and west. And best of all, about 300 fruit trees growing, some large enough to have fruit on these things. We have had some small fruit already, such as grapes, gooseberries, strawberries and currants.

Dear readers, if there are any people on earth that appreciate a nice home it is "we." I was raised on a farm in northwest Missouri, near Chillicothe. I helped my father clear a farm in heavy timber and did not have the privilege of school as boys do nowadays. My good wife was born in Tennessee, near Mount Washington. She came to Colorado with her parents in 1872. She knows how to work too.

I am breeding Poland-China hogs, B. P. Rock chickens and M. B. turkeys. We live in the garden spot of Colorado, having a fine climate, with a splendid view of all Sunflower Valley, also a stretch of about four miles of the A. T. & S. Fe. railroad, and 15 miles from Trinidad, the county seat of Los Animas county. This city has a population of about 8,000, and is one of the best local markets in the west. Everything is grown by irrigation. This valley is second to the Arkansas valley in the production of melons, and, as all know, the Rockyford has a world-wide fame for first-class melons. We are al-

most surrounded by large coal mines. Hard coal is worth \$1 per ton at the mines, which affords us cheap fuel. W. J. GIBBONS.
Los Animas Co., Colo.

OUR LETTER BOX.

Subscribers will please ask their questions as briefly as possible, and on a separate piece of paper. Give full name and address. Answers may be looked for in the department to which they belong, in subsequent issues, if not given with the question.

BROWN CO., OHIO.—This morning, April 10, at 6 o'clock, the mercury stood at 20 degrees, but as it is so very dry, I do not think there has been much damage done. More than half the breaking is done and a few will plant corn this week. Oats are all up; pastures are starting up nicely. Hogs, \$5.15; hay, \$8.42; wheat, 76c; corn, 61c. C. D. LYON.

FRUIT PROSPECTS IN CENTRAL MISSOURI.—The cold wave of last week did not injure fruit buds in this vicinity, and the prospects for an abundant yield of all kinds of fruit has seldom been brighter at this season of the year.

The weather has been very favorable for work in the orchard and garden this spring. We are at least two weeks ahead with our spring work as compared with last season. A. J. D.
Jefferson City, Mo., April 16.

A FLOOD GATE WANTED.—Will some of the readers of the RURAL WORLD tell how to build a substantial flood gate for a creek, one that will keep hogs or cattle from getting through and at the same time adjust itself to either high or low water? This creek is about 30 feet wide and in dry weather water runs from three to six inches deep, and after heavy rains the water rises very fast to the creek to a depth of about three feet. Scott Co., Mo. W. H. TANNER.

MONTGOMERY CO., KAN.—Spring is here, though the last six weeks we have had the worst of the winter. The weather is cool yet. Vegetation has made but little start. Wheat has come through the winter all right and is looking fine. Oats are all sown and those first sown are up. Corn planting is all the go now, and one-half the crop is planted. It has been put in fine condition on the winter plowing. Stock wintered well and spring pigs are doing finely. H. BELLAIRS.
April 7.

VINELESS SWEET POTATOES.—In reply to a recent inquiry about Gold Coin Vineless sweet potato, I will say that I have grown this variety by the side of the Yellow Jerseys and Red Bermudas on rich, black, sandy soil. The vineless yielded fully twice the amount of potatoes. We thought they were equal to the Jerseys in flavor and were much nicer tubers. I plowed the vineless with disc cultivator and kept them in good shape, as the discs would lift up the short vines (which is 12 to 18 inches long) and would roll the dirt up to the root nicely. I don't expect to raise any other kind, but for raising plants would make more on Jerseys at 20c per 100 than on vineless at 50c. Lewis Co., Mo. W. L. SHORT.

EFFINGHAM CO., ILL.—A few warm and spring-like days graced the advent of April and for a week the promise was fair that the seed time of the year had come; all nature rejoiced and vegetation was budding forth, humanity also revelled in the warmth of the new born spring, but alas! for human hopes, a Manatoba wave rolled down, accompanied by sleet and snow, and the situation was wonderfully changed. An Iceland frigidness made a very unpleasant aspect. It cannot be certainly predicted that the fruit is very greatly damaged, but the indications are that it is injured to some extent. The verdure of the gardens and fields has been marred and growth suspended for awhile. The farmers had taken advantage of the weather and excellent condition of the soil and a large acreage of oats is in the ground. Corn planting will not commence for some time yet. DYPE.
The Cliff, April 14.

Many who have subscribed for the RURAL WORLD and the St. Louis "Republican" or the RURAL WORLD and "Globe-Democrat," in combination, ask if they can add new subscribers at the fifty-cent rate. We answer, yes. While there is no profit on such terms, yet the RURAL is so anxious to preach the gospel of progressive agriculture to an ever-increasing clientele that it offers extraordinary inducements to get new readers, believing that the great majority obtained will remain permanent subscribers. There would be more readers of agricultural papers if their advantages to the farmer were better understood, and that they may see these advantages we offer the RURAL WORLD to new readers at less than the actual cost of the paper. Every one, therefore, is invited to send in new names at any time at this low price—but preferably two or more at a time. For renewals, however, the price remains at one dollar unless a new subscriber is sent, when the two may be received for one dollar.

Horticulture.

FRUIT PROSPECTS.

Following the widespread storm and comparatively low temperature of the middle of week, there was considerable anxiety felt for the peach and other fruit crops. Prior to the cold snap the prospect for a large yield was good, and it was feared that much damage would result. Reports received at this writing do not, however, indicate that there has been much injury to the peach buds.

In Northern Texas a heavy frost fell on the night of April 11, which killed young vegetables and seriously injured corn and early fruits.

From Kansas the report is that little or no injury was done to the fruit and the prospect is good for a large crop. Similar reports come from Illinois and other states.

HORTICULTURAL TALKS.

Planting Peach Trees.—As I have been doing this kind of work for a few days (although still rather weak) I will tell how I do it. Others may have a better plan, but this seems to me the proper plan. The trees are dug out of my own ground and are one year old from the bud, ranging from five to seven feet high and stocky. In digging the trees we use a sharp spade and are not particular about cutting far from the tree. Four to six inches is all the root I want. When taken out the roots are cut off smoothly at the ends, the top being trimmed to about 25 to 30 feet.

The holes having been previously dug, the trees are dropped into the holes, say 25 at a time. My boy goes ahead and takes the dry ground out of the hole, scrapes the dry soil off the top of the pile of earth beside the hole, and sets the tree back. I follow with a shovel, and holding the tree in position with my left hand, use the shovel with the right to do the planting.

Besides cutting back the main roots, I clip out the little fibrous roots, so that when filling in the ground, there may be no places to hinder the earth from coming in close contact with the roots. Hold the tree in such a position that when finished it will stand an inch or two deeper than the nursery where it grew. Third, in fine soil until the roots are covered, shaking the tree up and down, so there will be no cavities. Then press the earth firmly. Next fill the hole up even with the surface and press lightly with the foot, using care to have the tree perpendicular. One gets so used to this that he can hardly plant a tree leaning. As a rule, I pay no attention to the manner in which the tree stood in the nursery, yet it comes natural to set it as it grew. I always bud on the northwest side, so two inches above the ground; so when setting the tree the bud is northwest.

How many trees can a man set in this way in a given time? I can plant 50 in an hour, and am ready to insure every one. Out of the 200 recently set out, I don't count on losing one. Although I have not a commercial orchard, I will do some planting. I have a few hundred more to plant. I am giving a neighbor 100 trees to plant and take care of. I take my pay out on one crop of the fruit in such a season as I may choose. What varieties did I plant? Some may ask. Elberta about half, Crosby, Summehanna, Cottage, Heath's Cling, Parks, Latt's Wonderful, besides two trees each of some 20 new kinds that I never grew before.

April 11.—This morning is a startle—one inch of snow on the ground, a keen northeaster and mercury at 28 deg. This does not look very promising for our early fruit crop. Hale plum trees are in full bloom and Russian apricots ditto. Now the escape or destruction depends upon the going over of the snow. These 4 deg. of freezing, I don't think will kill the blossoms, if it thaws gradually and dries off with the mercury above freezing. Time will tell and we must abide by the result. While we can control many things and guard against casualties, the weather is beyond our power. It would certainly be a great disappointment if our fruit should get nipped, when the prospects were so good, but the best way is to bear such losses philosophically. Many new peaches, of which I never saw the fruit, have blossom buds. They have been looked upon with great interest; if they fall we must wait another year to be, perhaps, again disappointed. There was a time here in Missouri when we counted three crops of peaches in five years, and late years two crops in five years is about

all we can expect. This does not seem profitable and many fail to plant. If I get one good crop of choice peaches in five years I think I am paid for the trouble. It seems a pity to dig up and head back young trees that have lots of blossoms. My Elberta and Crosby trees in the nursery rows have lots of blossom buds on them. SAMUEL MILLER, Bluffton, Mo.

TREE PLANTING.

Editor RURAL WORLD: I have just lately finished reading a book on "Thought Transference." Since then for some reason or other my thoughts have wandered from farm scenes to the editors and correspondents of the RURAL WORLD. In the interval, I have been reading a circular from the Division of Forestry of the U. S. Department of Agriculture. Then comes along the RURAL WORLD of March 2, where in the very first column is the recommendation to read an article upon waste places. Now whether there is anything in thought transference or not we will not discuss here.

However, the planting of trees upon the Western farm should be seriously considered, whether we have waste places or not. How forsaken and forlorn-looking are the farm buildings, more particularly around the dwelling, without either tree, shrub or bush. Where such is the case you will generally find the man, buildings, implements, and management of the farm upon a line with the scenery. Some of our Western farms have spots of land that are not accessible to the plough or reaper, which some may call waste land. These may readily be planted to forest trees and in a few years become of considerable value, supplying part, at least, of the needs of the farm. But even if an acre or two of good land adjacent to the pastures and accessible to the stock were planted with forest trees for shelter belts, it would be well worth the time and money invested. Stock would then be the preference to trees over open board sheds.

In states where farms are cleared from the natural forest, there is often left from ten to twenty acres of land, as preferred, as a source of supply of fuel, and timber for buildings and repairs, besides being shelter belts and wind breaks. Those of our Western farmers who have had no experience in tree planting, should write to the U. S. Department of Agriculture, Forestry Division, for circular No. 22, which explains how practical assistance to tree planters will be given. At the same time ask for list of Farmers' Bulletins, all of which are free to all who apply. Send postal card. Such lists come to my address regularly, from which I pick what selections are suitable to myself and locally. Last February I had about a dozen at all times.

There is some truth in the saying, "that a person has to go abroad to learn what is going on at home." The circular referred to above informs me that Mr. E. T. Hartley, near Lincoln, Neb., had an acre of land planted to willow. With that information the writer stopped Mr. Hartley a few days ago upon one of the principal streets of Lincoln and asked him about this timber land. Mr. Hartley is prominently connected with our agricultural and horticultural societies, has a large commercial orchard, beside small fruits, and is well known throughout the state. Mr. Hartley states that 12 years ago he planted two acres of land to forest trees, setting them four feet apart. He has had a large orchard, and has had no means waste land, but as good as any corn land on his farm. Several years ago he began cutting for fence posts, thus thinning and giving more space for the remaining trees to spread. For the last four or five years he has obtained from this source all the posts needed on his two farms, and within the last two years he has had within the last two years he has had his land sold to other farmers. He has had fuel for some years back to supply the two families living upon the farms, and has at the present time enough fuel cut to supply all their wants for next winter. He considers that he has a permanent supply.

Mr. Hartley can give the expense in detail from the first purchase of the trees and care of them, and finds that the two acres are as profitable as any other two acres upon his farm.

Now, if those interested will consider the advisability of such groves as shelter belts and wind breaks and then consult the U. S. Division of Forestry, which will give advice free, we predict that they will try the planting to the extent of one acre at least.

For myself, I have no personal interest in the sale of trees in any way or shape, and no prospect of such in the future. JOHN BETHUNE, Lancaster Co., Neb.

FROM THE ANTIPODES.

Editor RURAL WORLD: The above designation may surprise you, and perhaps more so of your readers. But that we are fast becoming the antipodes of the states where I read the reports in the papers stating that the winter just past was one of the hardest passed through; with hailstorm, deep snow, and killing frosts even extending to Florida and Louisiana, which make me shiver all over even to think of them, while we have had one of the most propitious and mildest winters which that famous person "the oldest inhabitant" ever saw. I have been here over 18 years, and never saw such a season. From the first rains, late in October, which started the grass on our hills and pasture, we have not had a frost hard enough to check the growth all winter, and now grain is heading out, and grass and weeds are from one to two feet high. Roses, geraniums and tulips have been blooming all winter out of doors; even heliotropes wintered well without any protection and are blooming freely now.

Our stock is all sleek and fat on what they find in the pastures, can eat their fill in a few hours, and lie down in the rank grass to digest it. The only pity is that we have not enough to make use of all the surplus.

And our fruit trees? I never saw such a wealth of blossoms on all kinds; apricots, almonds and cherries are about half grown; peaches, plums, prunes, etc., are far advanced. Apples, pears and quinces are setting heavily, and figs are the size of my thumb. Grape vines have shoots three inches long, and if no damaging late frosts occur, in April or May, we will have the greatest fruit crop this, the northern part of the state, ever saw.

The question with us is how to dispose of

all this to the best advantage, especially as farm labor is very scarce. Last year 75 cents per day and board were considered fair wages; now they have risen to \$1 and wages, and help is difficult to obtain at all. In a few weeks fruit packing will commence, and there will be abundant work for women, half-grown boys and girls.

The state is in a most prosperous condition, at least the central and northern part of it, with San Francisco and Sacramento as its business centers; new enterprises and railroads are planned, and money is abundant. In the extreme south, money is abundant. In the extreme south, money is abundant. In the extreme south, money is abundant.

This state is bound to become the most prosperous in the Union. With all its advantages, its inimitable climate, and its, as yet, unexplored lands in this part of the state, San Francisco must become the metropolis of the extreme West. The untold treasures yet lying hid in our fields and mountains, the multitude of mineral springs, if once made tributary by railroads and streams as feeders, will the city grow faster than any other I know of. Our northern counties, with their healthy, invigorating atmosphere, assisted by their clear mountain streams and springs, must become the great sanatorium for the sick, while its scenery, its loveliness, grandeur and beauty, is unrivaled.

A railroad is now on the eve of being built from San Francisco to Clear Lake, a distance of about 75 miles, which will open that country for travel and sojourn during summer. These lands, which it can now be reached only by a dusty ride of 35 miles over rough roads by stage, can then be reached by an easy ride of three hours, and the visitors, which now count by thousands, will be increased tenfold. But I must close or your readers will accuse me of romanticism, though I only tell plain truths of which they can be convinced by ocular inspection. Come and see. GEORGE HUSMAN, Napa, Cal. April 3.

ARKANSAS FRUIT NOTES.

Editor RURAL WORLD: In this section we are having it very dry and warm just now, something unusual for Arkansas at this season of the year. Peaches, pears and plums are out in full bloom and have a full set of summer clothes. When we go out among them it is very sweet and pleasant, and oh, so lovely! I wouldn't be a fruit grower? The peaches produce a big crop. Pears could never look better, especially the Kelfers, which look like snow balls just now. The Garbers and Duchesne are coming on later, as well as the Bartlett, Seckel and Lawrence. Apples will be out in a few days, and look as though they will be loaded with fruit from top to bottom. Cherries are just beginning to show the white in the bloom and are very full of fruit buds. Grapes will, no doubt, make a fair crop where they are sprayed to prevent the black rot, which did a great deal of damage in this section last season. Our strawberries are looking very well, but the crop will be light and very late, at least two weeks later than usual. Raspberries, less than half crop, especially the black caps. Red raspberries, blackberries and dew berries will make nearly a full crop.

The tomato plants are looking very well but later than usual, and will not be put out in the field much before April 15. A good many tomatoes are being planted this spring. Nearly every fruit and vegetable grower will have a home canning plant ready by the time berries and tomatoes are ripe, and will can up his surplus produce. This is one of the most saving ways to take care of our surplus fruit and vegetables. I only wish every fruit grower could see the advantage of one of these farm canneries. It would not be long before every grower would have one.

Stock is looking well, but feed is getting pretty well cleaned up and very little grass is in sight. With a few April showers it will be all right in a very short time. Stock hogs are selling at 3 cents; fat hogs, 3½ cents per pound. D. S. HELVERN, Fulton Co., Ark., April 7.

A TRUE VINELESS SWEET POTATO.

Editor RURAL WORLD: Some few years ago a so-called vineless sweet potato was introduced. This variety was thoroughly tested here, found lacking and discarded. The name "Vineless" is variety, to be characteristic of the variety, which is not true, and it is so named inferior to our improved Jersey Nansmond in yield, appearance and quality that we could not conscientiously offer it to our customers, even though there was demand for it.

We have now a new variety, a sport from the Yellow Jersey, which is a true Vineless; having no vine whatever, simply a big bunch of leaves. We call it "Yellow Jersey Bunch." This potato is sure to become very popular, as it grows to growth renders it of easy culture, and in every other respect is the same as that most popular variety, "Yellow Jersey Nansmond." Another most valuable variety is the "Early Carolina." It being simply the Yellow Jersey greatly improved. EDWIN H. RIEHL, Alton, Ill.

MANURE THE GARDEN.

Editor RURAL WORLD: I have made gardening a hobby for several years and I find out something new every day. In fact we never get too old to learn. I garden on a very large scale and find that I have to make a very close study of it in

order to make a success of it. Many of our farmers farm on the roads and in town too often, especially those that live near town. If they only would stay at home and take that old hoe that hangs on the garden gate or fence, almost eaten up with rust and sharpen it well, go to the corn field and cut those weeds out of the corn, they would realize at the end of the year how misspent their time had been previously. There is one thing certain, you can not raise corn and weeds in the same hill the same year.

You can travel over our country to-day and see barns rotting down on account of the manure not being hauled away. That's one thing I can say about a Dutchman and I am proud of it, he will haul all the manure out on the fields that he can get and call it personal property. I have one piece of ground that I am gardening. I pay for it \$9 per acre cash. Men have stopped me on the streets and said, "Waters, how can you afford to pay such a big rent? I don't see how you can make a living above your rent." I tell them that the man I rent from hauls manure to the year round. That piece of ground gets a good coat of rotten manure each year. When we take a crop off, the ground gets something back in return. COLES CO., ILL. WM. WATERS.

TREATMENT OF STRAWBERRY BEDS.

Editor RURAL WORLD: In answer to recent from Greenville, Mo., will say that well-rooted runners are excellent for use for starting a new patch, and no doubt there are many such to be spared in the bed he refers to.

Burning off a patch after fruiting is in many cases advisable, as it destroys many injurious insects and weeds without injuring the strawberry plants. ALTON, ILL. EDWIN H. RIEHL.

CALIFORNIA SILK INDUSTRY.

San Diego, Cal., April 10.—A wealthy Japanese silk grower when in San Diego recently stated that this section was far better suited to silk worm culture than any section of the country he has ever visited. The Chamber of Commerce began to look into the silk industry. It was found that France provides a season for the silk worm of but 42 days, while in San Diego four crops of cocoons can be reared each year, and the season lasts 240 days. The Chamber of Commerce is now devoting its energies to silk culture. Five thousand mulberry trees will be distributed at once, and arrangements have been made for the purchase of a large quantity of silk worms. Mrs. Williams, who is known in the Department of Agriculture at Washington as an expert on silk culture, is now a resident of San Diego, and she asserts that the industry will thrive here better than in any other section of the country. The theosophists, whose national headquarters are at Point Loma, have been induced to make a start in their colony, and will at once set out five acres of mulberry trees.

APPLE SCAB.

Professor T. J. Burrill, of the Department of Agriculture, of the University of Illinois, has announced that the parasitic fungus, usually called apple-scab, does not winter as supposed on the twigs of the tree, and therefore cannot be killed by spraying before the buds open. This is deemed a very important matter in practical orchard management, for success hinges greatly upon the destruction of this parasite and this destruction is dependent on knowledge of its life history. For best results the first application of the fungicide (usually Bordeaux mixture) should be made just after the leaf buds open. The investigations upon which these statements have been based were made by Mr. G. P. Clinton, of the botanical department, in the spring of 1899.

The Apiary.

BEE-KEEPING FOR FARMERS.

D. N. Ritchey is very emphatic in the belief that every farmer should keep bees, and says a farmer who hasn't one or more colonies is not up to the times. He thinks not five per cent of the farmers have honey on the table for food, and he probably might have made the percentage much smaller without distressing the truth. A notable statement is this: "I can show you farmers living by me who had not a crop of clover seed for 25 years, until I moved here and bred my bees to such a size that they can work on the red clover; and now they are getting large yields of the very best of seed."—Busy Bee.

BEE KEEPING.

(From a bulletin by B. J. Chrysothem of Notre Dame, Ind., University.) The work of raising and taking care of bees is carried on by so few persons, that scarcely any one outside of those directly interested give the subject any attention. When, however, the means and methods have been explained by one who has been successful, the difficulties may not appear so great and unmountable as people generally suppose.

The three things necessary to make the care of bees easy and profitable to those who cannot give much attention to them are:

1. A perfect hive.
2. A convenient shed or house in which to keep the bees and the fixtures, so that most of the work can be done on wet days.
3. Good management.

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Live Stock.

COMING SALES.

April 19—C. C. Bigler & Son, Hartwick, Iowa. Shorthorns.
April 19—Tom C. Posing & Sons, Mowqua, Ia. Herefords.
April 20—Brookside Farm Co., Galloways, Kansas City, Mo.
April 20—Armour, Funkhouser, Sparks and Logan, Kansas City, Mo. Herefords.
April 20—W. T. Miller & Sons and L. L. Moorman & Co., Shorthorns, Winchester, Ind.
May 1, 2—Charles Escher & Son, C. H. Gardner, Thomas Mattinson, Jr., M. A. Judy, Everett Jones and Others, Aberdeen-Angus, South Omaha, Neb.
May 10-12—W. R. Brasfield & Co., Kansas City, Mo. High class trotters, roadsters, saddlers, pairs and general purpose horses.
May 15—Colin Cameron, Lochiel, Ariz. Hereford cattle at Kansas City Stock Yards, Horse and Mule Market.
May 17—T. J. Wallace & Son, Shorthorns, Kansas City, Mo.
May 22—J. B. & Perry Finch, Shorthorns, Oxford, O.
May 23—C. L. Gerlaugh, Shorthorns, Osborn, O.
May 24—W. L. Wood, Shorthorns, Willamport, O.
May 25—J. C. Shropshire, Mgr., Shorthorns, Monroe, Ky.
May 31—O. C. Halstead, Shorthorns, Rensselaer, Ind.
June 6—Indiana Breeders, Shorthorns, Indianapolis.
June 6—Jas Wilson & Sons and A. L. Ames, Traer, Ia. Shorthorns.
June 7—J. W. Harper, Shorthorns, La Fontaine, Ind.
June 14—Benj. Whitsett & Sons, Shorthorns, Pre-Emption, Ill.
Oct. 4—Martin Flynn, Shorthorns, Des Moines, Ia.
Oct. 5—E. S. Donahay, Shorthorns, Newton, O.
Oct. 17—Arthur H. Jones, Shorthorns, Delaware, O.
Oct. 17—Chas. Ott, Shorthorns, Hedrick, Ia.
Nov. 14—Hector Cowan, Jr., Paulina, Ia. Shorthorns.
Nov. 22 and 23—Logan Chappell, M. R. Leonard, M. Walter Waddell and Thos. Sawyer, Lexington, Mo. C. B. Smith and N. W. Leonard, Fayette, Mo. Herefords. Sale at Kansas City, Mo.

STOCK NOTES.

CALDWELL CO., MO. HEREFORDS.—Wm. Humphrey of Ashland, Neb., purchased twenty yearling Hereford bulls of George Gibson of south of town yesterday for \$2,000. Mr. Gibson also sold his Hereford cows yesterday to J. H. McElldowney of Chicago Heights for \$100 per head.—Hamilton (Mo.) Advocate.

BOONE CO., MO. SHORTHORNS.—The breeders of Shorthorn cattle in Boone County held a meeting in the court house here this afternoon and made arrangements by which they hope to interest the entire state in a plan for the advancement and promotion of the breeders of this particular breed of fine cattle. They wish to put a premium on Shorthorn stock that will bring about a larger demand for this breed, and to cause the stockmen of Missouri to develop more interest in Shorthorns than has previously been demonstrated. At the meeting to-day Burrus was elected temporary chairman and R. W. Dorsey secretary. After several addresses on the subject under discussion a committee was appointed to prepare by-laws and draw up a constitution for the proposed association. The date of the next meeting was left subject to call. At this meeting permanent officers will be elected and all essential rules adopted.

COOPER CO., MO. SHORTHORNS.—W. P. Harned, proprietor of the Idlewild herd of Shorthorns, at Vermont, Cooper County, Missouri, sold the bull Roan Chief, to Mr. J. C. Hall, Hallsville, Mo., for \$500. Roan Chief was sired by the Cruickshank bull, Prince Victor 1129646, out of the Cruickshank cow, Malona, a daughter of Imp. Abney 1014691. Malona was out of Clara Glanville by Imp. Lord Glanville by Brampton. Roan Chief's sire was also the sire of the Cruickshank bull, Duke of Haddon, which heads the herd of the Idlewild herd. Mr. Harned reports that calves are now coming thick by Godoy, and if they maintain the old bull's past record as a sire he feels that he will be able to continue to supply his customers with most select young stock.

THE ARMOUR HEREFORDS.—The two-day sale of Herefords which will be held in Kansas City, April 25 and 26, when Messrs. Armour, Funkhouser, Sparks and Logan will offer 114 head of bulls, cows and heifers, will be an unusual opportunity to purchase stock of the highest breeding and highest individual quality. Every draft from the four herds that will be represented in the sale will comprise animals of unusual merit. In the Armour offering, among the females, the imported cow Prudence, lot 61, illustrated in catalogue, is probably the premier. She is a strongly bred Horace cow with one Wilton cross and comes from a sire who has won over everything in England at all prominent shows. Lily Beau Real, lot 55, from the celebrated bull Beau Real, and out of the almost equally celebrated Lily Cochran family, is one of the few young Beau Real cows left and probably one of the few that will ever be offered at public auction. She is as grand in the field as

State of Ohio, City of Toledo, Lucas County—ss.
Frank J. Cheney makes oath that he is the senior partner of the firm of F. J. Cheney & Co., doing business in the City of Toledo, Ohio, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh of the bladder cured by the use of Hall's Catarrh Cure.
Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1899.
(Seal.) A. W. GLEASON, Notary Public.
Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.
F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, etc.
Hall's Family Pills are the best.

In her pedigree and will undoubtedly command attention. In the Armour herd females lot 63, Armour Maid 16th, is a fine specimen of Kansas Lad's get, and is one of the few Kansas Lad heifers that will probably ever be offered at public auction. Lot 68, Temptation, is the distinguished Armour sire Beau Brummel, Jr., and out of Armour Maid 15th, probably the best cow that Mr. Armour ever bred. She is illustrated along with Queen Quarantine, lot 61, Bluebell, an Earl of Shadeland 36th cow and one of the best breeders in the Armour herd, although ten years old, is still in her prime and has had a calf every year. There are few better cows in the offering than she. Lot 67, Rebecca, is an imported cow of the massive type. She is very smooth and is about as large as Lady Laurel. In bulls, lot 94, illustrated, dam imported Prudence, illustrated, is one of the best young things in the sale, although it would be difficult to choose between him and Prosper, lot 90, a Beau Brummel bull out of a Kansas Lad cow, she also by Kansas Lad and out of a Grove 2nd cow. An interesting pair will be found in lots 75 and 95, twins out of Queen Mab, a Prince Edward cow, also in the sale. Lot 96, an imported bull, The Strand, out of Prudence, is a very growthy animal and should find a place in some good herd. Lot 74, Bright Knight, bred by H. B. Watte, Fayette, Mo., should find many fanciers who are willing to give him a place with the best in the offering. Taken right through in both bulls and females there will be found the very best blood lines and yet in such variety as to make them available for any herd. If catalogue have not been secured send for one at once.

VACCINATING FOR BLACKLEG.

A Strong Defense of the Practice.

Editor RURAL WORLD: As veterinary editor of the RURAL WORLD it is but natural that every article in its columns pertaining to the diseases of live stock should be first to claim my attention. Conspicuous among this class which have attracted my notice is the article by Mr. John G. Thomas, which appeared in issue of March 14, wherein he makes appeal for free distribution by the Federal Government of blackleg vaccine, and that by Mr. S. T. Thomas, who answers this appeal in issue of April 11. The practicability of the idea of free distribution of vaccine for blackleg as set forth in Mr. J. G. Thomas' paper, is not now my purpose to discuss; but the subject matter of Mr. S. T. Thomas' article, wherein that appeal is answered, certainly calls for criticism on my part. To the latter his article may seem reasonable, but to the veterinary practitioner it reveals a woeful ignorance upon the subject of blackleg. It is very evident that Mr. Thomas in his zeal in reading upon blackleg, as he supposes, has gotten on to the wrong road and has, instead, acquainted himself with anthrax, a disease which, in most of its symptoms, so closely simulates blackleg that it is very generally confounded, but only by the lullay and amateurs, with the latter disease. Mr. Thomas' article is a case in point; he simply doesn't know what he is talking about, and in his denunciation of Pasteur's experiments he is lost in a maze entirely. Truly a little learning is a dangerous thing. It is true Pasteur was the first man to discover disease-producing germs, not only anthrax, but of a number of other diseases, and he did also prepare a prophylactic vaccine against anthrax, which the French Government made public after paying the French savant a princely sum for his secret, but Pasteur did not discover the prophylactic blackleg vaccine virus; this is to the credit of Arloing and Thomas. These scientists made what is called a double blackleg prophylactic vaccine. Since the Arloing and Thomas discovery other investigators have found, after years of careful investigation, that a single vaccine is preferable to a double one in many respects.

If S. T. Thomas was as familiar with the actions of his own government as he seems to be, he would know, for one, that our United States Bureau of Animal Industry does not and never did manufacture anthrax vaccine, but has for some years been manufacturing for free distribution to state veterinary officials a single blackleg prophylactic vaccine.

Another random shot is fired by Mr. Thomas quoting from Prof. Peton of Paris in the "Practical Medical Journal" in these words: "In New South Wales Pasteur's representatives inoculated 12,524 sheep, of which 3,174 died." This is no doubt official, but it is to be repeated, neither Pasteur nor any of his representatives ever vaccinated against blackleg in sheep; and right here it will be pertinent to ask: Did Mr. Thomas or any other of the writers of the RURAL WORLD ever hear of a sheep in Missouri or in any other country, for that matter, being affected with blackleg? And yet sheep run every day with cattle dying of this disease. This is from the fact that all animals, except young cattle, are immune to blackleg. With anthrax no animal is immune, man included; poultry even succumb to the disease. But the subject can be made plainer by quoting from a paper presented by the writer at the Missouri farmers' institutes of 1898, in which I attempt to show somewhat briefly how to differentiate between anthrax and blackleg.

T. E. WHITE, D. V. S.
(To be continued.)

IN THE PECOS VALLEY, N. M.

Editor RURAL WORLD: During 1899 120,000 head of cattle were shipped from the valley. This year the estimate is 200,000 head, and it will probably exceed that number for all classes of stock, feeders, stock cattle and beefers. Herefords are the favorite breed almost to the exclusion of the Shorthorns.

The irrigation lakes are now so well filled with water that the valley is on the safe side for the next six months, even without a drop of rain. The river is running bank full and keeps the great dams up to their standard limit.
The Pecos Valley Railroad, now running between Pecos City on the south and connecting with the Texas and Pacific and the Santa Fe and Denver at Amarillo, has opened up a good country and one that in the coming years may become a valuable feeder for the eastern cattle markets. St. Louis cattle men might do well in giving this valley a visit this season, not only possibly for what it is, but for what it promises to be.
The biblical poet said "all flesh is grass," and so it may be said of this district, for the grass on the ranges is abundant and it is being rapidly turned into flesh.
GEO. H. HUTCHINS.



FRANK H. HEARNE, Secretary American Galloway Cattle Breeders' Association, Independence, Mo.
When, in August, 1896, Mr. Frank H. Hearne, of Independence, Mo., was chosen Secretary of the American Galloway Breeders' Association, many of the young man's well-wishers had some misgivings as to the wisdom of putting him into the shoes of so widely known and experienced a stockman as the late Secretary, Col. Muir. But, though young, Mr. Hearne had energy, grit and intelligence, and these qualities put into the work have enabled him to win. He has been unanimously re-elected every year since his first election, and his salary has been increased from year to year until it is now more than double what it was in 1896. This tells the whole story so far and is a promise of better things to come. We'll hear more of Frank H. Hearne.

THE GALLOWAY HERD BOOK.

By the kindness of our friend, Frank H. Hearne, the active and intelligent secretary of the American Galloway Breeders' Association, Independence, Mo., we are in receipt of volume 10 of the Galloway Herd Book. The volume is good evidence that the Galloways are rapidly winning favor among cattle breeders. It contains entries of 2,023 animals, 845 bulls and 1,178 cows, making 14,482 bulls and 16,504 cows thus far recorded in the Herd Book. Secretary Hearne says: "There never has been a time when interest in Galloways was greater, and the demand is increasing both from the ranchmen and the farmers. During the past year they have done all that was claimed for them, and have proved to the world that they bring the top price with any kind of fair treatment, when brought to market. They are always good sellers on any market, and the breeders have a good demand for all their surplus stock."

In addition to the usual information regarding the animals recorded, indices of owners, etc., the volume contains an interesting article on "Later Galloways," by D. McCrae, Guelph, Canada, supplementing an article on "Early Galloways" which appeared in volume nine. There are also a lot of half-tone engravings from photographs of specimens of the breed and two portraits, one of J. C. Huntington, Rochester, Mo., vice-president of the Association, and one of Rev. John Gillespie, Dumfries, Scotland, Secretary Galloway Cattle Society.

THE RED-POLLED CATTLE.

Several readers ask us to give the history and general characteristics of the Red Polled breed of cattle, says the "Rural New Yorker." In various parts of the West this breed seems to be quite popular. During the past few years there has been a growing demand for what is known as the dual-purpose cow. That is, a cow which will give a fair mess of milk for dairy purposes, go to the block in good shape, and be a good mother. One of the best and send her son there to receive a full butcher's certificate. It was thought that the Shorthorn dairy type would fill the requirements, but there are many who prefer the Red Poll. She seems to be a surer dairy animal, and then again there is always something in the idea of handling a new and novel breed of cattle. Curious to say, the origin of the Red Poll is somewhat clouded in obscurity. The County of Suffolk, in England, had from the earliest times a polled breed of cattle, and probably this Suffolk breed had much to do with molding the type and discharging the Norfolk breed. There were originally two distinct breeds of cattle in the central and northern part of the island of Great Britain. One of the breeds had medium horns, and it probably produced the Devon, Hereford and Sussex cattle. The other breed was hornless, and probably produced the Galloways, Angus and the Red Polls, which probably came from combining the Suffolk and Norfolk Reds. It makes little difference, however, to the American breeder, as the name of the breed is more likely to ask what the cow will do, and what they will do. They have now been in this country for a quarter of a century, and in the West especially they have made an excellent record. The Iowa Agricultural College has a choice herd of Red Polled cattle. Last year in writing us about them, Prof. Curtis made the following statement, which certainly speaks well for them:

"A complete record is kept of all feed consumed, and the amount and value of all dairy products and both are credited at prevailing market prices. This kind of a record is also kept of four other breeds of cattle that we have under investigation at present, viz., the Shorthorns, Aberdeen-Angus, Jerseys and Holsteins. Under this condition, the Red Polled cattle are rendering a good account; a number of the cows in our herd are producing 300 to 400 pounds of butter per year, and a net profit of 25 to 40 per cow."

It is claimed for the Red Polls that they are exceedingly uniform in color, and that the color is well stained into them. Even when crossed with breeds of different color, 90 per cent of the grade will be dark red. The hornless character, too, is almost as well fixed as the color, for when crossed with ordinary cattle a large proportion of the calves never even start a bud on the head. They are blocky in shape, smooth and very heavy along the loin and hindquarters, and have a perfect beef shape. They are, without question, the best dairy cattle of all so-called beef breeds, probably excelling in this respect the Shorthorns, except possible those strains that have been bred for years in milk lines. It would seem that for localities where a general-purpose cow is required, this breed would give great satisfaction. For crossing in a miscellaneous herd of cows where both milk and beef are desired, probably no sire would give more satisfactory results than a Red Polled bull of good breeding.

Veterinary.

Answers to questions in this department are given by Dr. T. E. White, former State Veterinarian for Missouri, Sedalia, Mo. Write questions on one side of paper only, and separate from other business.

VENTRAL HERNIA.—I have a mule 10 years old this spring. It jumped on a picket fence last week and broke inside the strophon. You can get your two fingers inside. The outside skin is not broken. Will a bandage help or not?
Montgomery Co., Mo. ED. COPE.

If the edges of the strophon are healed, bandaging will do no good. The bandage should have been applied immediately after the accident to be of benefit. However, as the mule grows and fattens, the fat may close or hide the opening.

FOUL IN THE FOOT.—I have a yearling steer that has something the matter with his feet. They are sore between the toes. These sores discharge pus which is eating up in the foot. What is the matter and what will effect a cure?

Put away all loose and detached hair so that the sore will be well exposed. Soak a large piece of cotton batting in a ten per cent watery solution of carbolic acid; apply this all over the diseased parts; hold in position with a good strong bandage. Re-dress the feet as above once every day or two until entirely healed.

SICK COW.—I have a sick cow. She has a calf now two weeks old. The symptoms are as follows: When she stands, she curves her back up, froth and water run from her mouth. I do not see her chew her cud. Her neck and head tremble after getting up, and after lying down, she walks stiff and tottering when in motion and looks thin. She eats corn and other feed, but cannot masticate as usual, but evacuates all right; has no great desire to drink water. I have given her our home remedies, baking soda, lard and two three slices of raw bacon.

AUGUST STRIKES.

St. Louis Co., Mo.
Evidently there is something wrong with the cow's mouth or throat. Examine the teeth carefully, one or more of them may be loose, split, or she may have a decayed molar as the cause of the trouble.

STRICTLY RED FEATS.—I have a fine young Jersey cow, soon will bring second calf. All of her teats are strictured, one completely closed and giving no milk, and one which I have to force the milk through the stricture before I can milk it out. Now, please tell me what I can do. I would rather not use an instrument which would cut or split it, as that seems to me to be rather severe. Are there not tubes or probes made for the purpose? Please advise me where I can get what I need.

JOHN W. RUSSELL.
St. Clair Co., Mo.
You can get a milking tube from the Bliss-Moore Instrument Co., 308 Pine St., St. Louis, Mo., to draw off the milk from your cow. The tubes cost from 35 to 50 cents apiece. One is all you will need.

A STEER WITH COLIC.—What alls my calf? He will tramp with his hind feet and keep his tail in motion. Sometimes he is quiet, but at times he leaves the other stock and walks about in the field, continually moving his tail as he goes. He can find nothing wrong with him externally. He will be a year old in May. I feed him crushed corn and cob and hay and fodder in shelter. He is in moderate flesh, but is losing.

F. WEHRMAN.

MONTGOMERY CO., MO.
Give this calf a drench composed of one pound of epsom salts dissolved in one quart of water. If the trouble is due to some obstruction in either the intestines or one of the four stomachs. It may be a hair ball or an accumulation of corn cobs lodged in some part of the alimentary canal. Man has appendicitis and so do animals.

POSSIBLY ACTINOMYCOSIS.—I have a calf nearly a year old which has a lump on its jaw about half way between the ear and the lower back point of the upper jawbone. It has been there about a month and gets a little larger all the time. It has not broken, but feels like a hard lump. I can find nothing wrong with him internally. He will be a year old in May. I feed him crushed corn and cob and hay and fodder in shelter. He is in moderate flesh, but is losing.

RAY CO., MO. CHAS. L. RENFRO.
Polio, tumors, scrofulous tumors and lung jacks tumors all being similar in outward appearance, it would be difficult to diagnose the exact nature of the trouble without personal inspection. In the absence of a qualified veterinarian would advise that you have your family physician pass his opinion on the case.

BOILS.—What is the matter with my horse? About a year ago little hard lumps about the size of a marble came out on his body, the greater part being on his belly. They left his body with the exception of six or seven, which are the size of an egg, are on his neck. What caused them and what will cure them?
Knox Co., Ill. S. McTERNAN.
These little boils are due to the closing of the mouths, so to speak, of the sweat glands in the skin of the animal. The trouble is caused by the sweat drying on the skin or to manure adhering to it. Sometimes drops of water freezing on the animal, etc., will cause such boils. They should be thoroughly washed and then split open clear to the bottom with a knife; this will allow them to suppurate, and by discharge of the offending material, the sudoriferous glands, which cause the trouble, are destroyed. The wound made with the knife should be dressed daily with carbolic vaseline ointment.

WORMY HORSE.—Will you, or some of the readers, please give a remedy for worms in a horse? I see very large white worms pass from my horse. I have tried copperas, wood ashes and animal condition powders. None of these have done any good so far. The horse keeps in poor flesh.
Warren Co., Mo.

There are over thirty different kinds of worms infecting the horse; from description given, we presume it is the lumbricoid, or round worm, which is similar to the earth worm, but in color are creamy white and in length from eight to ten inches long. It is a worm that inhabits the stomach and is very hard to eradicate. For such cases use the following as a drench once a day for four days: Turpentine, two ounces; raw linseed oil, four ounces. Shake well before using. Twelve hours after the last dose give a pint of raw linseed oil as a physic to pass off the dead and stupefied worms. Be sure to use raw oil—as the boiled will not purge and should never be given. You neglected to state the age or size of horse. The above dose is for a mature animal, good in flesh and sixteen hands high. If the oil does not physic within 24 hours after giving, drench with another pint.

PISTULA OF THE WITHERS.—I have a case of fistula, supposed to be caused by the horse striking a nail in his withers. The wound healed and I thought it was all right, but in a few days his withers began to swell, the side that had been hurt more than the other one. I opened that side at the old wound and have tried several remedies, but have failed to get it to heal. It runs more at times than others. There is an opening through the hide about as large as a wheat straw, and it still runs. The other side comes up and then goes down. I blistered with some hot liniment, but it did not seem to do it any good. If any one will give me some information or tell me what course to pursue to effect a cure, I will be very thankful.
Christian Co., Mo. FRANK VAUGHAN.

Fistula, no matter from what cause it forms, and it is mostly from a bruise, is always a very hard disease to cure unless taken in its earliest stage and placed under the care of a veterinary surgeon. The proper method, when the tumor is once fairly established, is to cut down on to the diseased parts, bodily, excising all diseased bone and flesh involved; lay open every sinus (trout or tube) so that they all connect; insert drainage tubes or setons that at the most dependent parts in a way that at all times the drainage is perfect. If the operation is thoroughly done the wound will be no more trouble to heal than that of a burr wire cut, and these are healed by the parts being irrigated once a day until healed with a ten per cent watery solution of carbolic acid.

ST. LOUIS NATIONAL STOCK YARDS.
Market Report Published by Evans-Holder-Buel Company.

Tuesday, April 17.
Markets for the week show increase of about 1,000 head, compared with last, and 9,000 over a year ago. Receipts at the National Yards increased about 1,000 compared with last week, but declined about 500 compared with a year ago. Market opened first of week strong, the higher. Wednesday and Thursday receipts were liberal, prices declined about 10c per cwt., and closed practically about the same as last week. Receipts included more good cattle than for some time past, but no strictly fancy on sale.

We quote best native beef steers 1,300 to 1,600 lbs. at \$5.05 to \$5.30, choice export steers 1,300 to 1,600 lbs. \$5.30 to \$5.60, good shipping and export steers 1,200 to 1,600 lbs. \$5.00 to \$5.20, fair to medium shipping steers 1,200 to 1,400 lbs. \$4.50 to \$5.00, bulk of native beef steers averaging 1,300 lbs. and upward, good quality, \$5.00 to \$5.50, one load, 1,500-lb., well fattened, plain quality steers \$5.00. Dressed beef and butcher steers 1,200 to 1,250 lbs. \$4.25 to \$5.50, bulk \$4.00 to \$5.40, 1,000 to 1,100 lbs. \$4.10 to \$5.25, bulk \$4.00 to \$4.50. Steers weighing less than 1,000 lbs. \$3.50 to \$4.75, bulk \$4.00 to \$4.50. Feeding steers, fat, 900 lbs. and upward, \$4.00 to \$5.00, bulk \$4.25 to \$4.75, quality only \$5.00 to \$5.50. Common to choice stockers \$3.50 to \$5.00, bulk \$3.00 to \$4.40. Stock heifers in full range \$3.00 to \$4.50, bulk \$3.25 to \$3.75. Fancy native beef heifers \$4.50 to \$5.00, very few on sale. Choice native heifers \$4.40 to \$4.90. Good native cows and heifers \$3.75 to \$4.30, medium \$3.50 to \$3.75, fair cows \$3.50 to \$3.90, inferior, light and old culling cows \$3.50 to \$2.50. Bulk of southwest cows \$2.75 to \$3.25, bulk native cows \$3.00 to \$3.25. Veal calves in full range \$4.50 to \$7.25, bulk \$5.00 to \$7.00. Heftetics and yearlings \$3.00 to \$4.00, bulk \$3.75 to \$4.00. Bulls, stags and oxen \$3.00 to \$4.50, bulk \$3.40 to \$3.90, stocker bulls \$3.00 to \$4.50, bulk \$3.25 to \$3.50. Milk cows and calves, full range \$3.00 to \$4.00, bulk \$2.50 to \$3.50, and calf, bulk \$2.00 to \$4.00.

Market on Texas and southern cattle closed in good healthy condition, steady to a shade higher than the close last week; 28 cars were received against 194 last week, and 249 corresponding week a year ago. Demand has been good. Quality of Texas ruled about the same as last week. Steers averaged \$3.24 lbs. and sold \$5.06, bulk \$4.25 to \$4.90. Indian Territory bulls sold at \$5.00, to \$5.65, stags \$5.00 to \$4.25, bulk \$3.25 to \$4.00, cows and heifers \$2.75 to \$4.45, bulk \$3.50 to \$4.00.

There has been very little change in Mississippi and Louisiana cattle. Mississippi yearlings sold at \$2.90, Arkansas and Tennessee yearlings at \$2.50, mixed cattle \$2.25, stags averaging 447 to 765 lbs. \$3.25 to \$3.85.

HOGS.—Wednesday, market uneven, opened 5 to 10c lower than Tuesday's best prices, late sales a shade better; Thursday, best hogs 5c lower, inferior and mixed 5 to 10c lower; Friday, moderate run and favorable advices, steady to 5c higher; Saturday, fair run, prices 5 to 10c higher on good, barely steady on pigs and lights, closed with advance nearly lost on best, lights slow and hard to sell at early prices; Monday liberal run, fully 5c lower. Range of prices: Butchers and packers \$5.50 to \$5.75, Yorkers and shippers \$5.45 to \$5.55, heavy pigs \$5.10 to \$5.35, light pigs \$4.50 to \$4.70, rough hewers \$5.00 to \$5.30.

The highest point for several years was reached Saturday, when Swift paid \$3.30 for a lot of 225-lb. hogs shipped to us by Bray & Fitzgeralds, Jersey City, Ill. SHEEP.—Receipts moderate, and week closed with gain of about 15c. Several loads of clipped Texas on sale at full range of prices \$5.25 to \$5.65. We quote following: Spring lambs 8 to 9c per pound, wool lambs \$2.00 to \$2.50 per cwt., clipped lambs \$3.00 to \$3.25 per cwt., wool sheep \$3.00 to \$3.50, clipped sheep \$2.25 to \$2.75, wool bucks \$3.00 to \$3.25, clipped bucks \$2.00 to \$2.50.

We saw account of W. M. Rogan, Hutto, Tex., four loads of 7-lb. clipped at \$5.65 per cwt., also 52-lb. Texas spring lambs, but not per pound. From Hutto, Tex., we saw account of C. W. Flynn & Co., Hutto, Tex., four loads 96-lb. clipped Texas sheep at \$5.75 per cwt., the top for clipped Texas sheep for the season.

LATE SUMMARY.
Monday, April 16.—CATTLE.—Receipts about 2,000, sixty cars in quarantine division, quality fair to good, light in native division, including four loads of pretty good 1,500-lb. cattle, sold at \$5.25. Chicago reported 19,000, and market mostly 10c lower. Prices about 10c lower in native

PUBLIC SALE.—114 HEAD. Representative Hereford Cattle.

ARMOUR-FUNKHOUSER-SPARKS-LOGAN.

We shall put into this sale the strongest lot of cattle of both sexes that we have ever offered at public or private sale.

Write for Catalogue.

Kansas City Stock Yards,

Wednesday, April 25th, Thursday, April 26th.

KIRK B. ARMOUR, JAS. A. FUNKHOUSER, JOHN SPARKS, JAMES E. LOGAN, Kansas City, Mo. Plattsburg, Mo. Reno, Nev. Kansas City, Mo.

Gentry Bros., Sedalia, Mo.

CEDAR VALE STOCK FARM.

Grand Duke of Hazelhurst 125444, assisted by Waterloo Duke of Cedar Vale 133065, and Waterloo Duke of Cedar Vale 2d 133068 heads our herd of pure Bates and Bates topped, pure Scotch and Scotch topped cows of the most fashionable families.

30 YOUNG BULLS AND HEIFERS

For sale at reasonable prices. Parties met at train. Farm 2 miles out.

TELEPHONE NO. 20.

WILLIAM MAFFITT, President. CHARLES PARSONS, Vice-President. W. A. RAMSAY, Sec'y & Treas.

MISSOURI STOCK YARDS,

ST. LOUIS, MO.

FORMERLY UNION STOCK YARDS, St. Louis.

The Missouri Stock Yards are the only wholesale stock yards in St. Louis for the sale of a kind of live stock. All of the packing houses and dressed beef plants in St. Louis have yards stationed here. All railroads and all steamboats unload their stock directly into these yards. Your stock will bring highest market prices.

W. A. RAMSAY, Manager.

ST. LOUIS NATIONAL STOCK YARDS,

THE LIVE STOCK MARKET OF ST. LOUIS.

Located at East St. Louis, directly opposite the city of St. Louis.

Shippers should see that their stock is billed directly to the

National Stock Yards.

C. G. KNOX, Vice-Pres. C. T. JONES, General Mgr. L. W. KRAKE, Asst. Gen'l Mgr.

PEABODY SHORTHORNS AND BERSHIRE

PEABODY good young bulls from 9 months to 2 years old. Also the grand Cruickshank bull, Scotch King, by a grandson of Imp. Cup Beaver, out of the celebrated cow, Red Maid, a massive daughter of Imp. Cup Beaver. Also the 6-year-old Cruickshank bull, Duke of Woodale 117107, by Aldrie Duke of Hazelhurst, dam Kirklingham Princess 320. Also Berkshire for sale cheap, quality and breeding considered. For prices and particulars address:

JUNE K. KING, Marshall, Saline Co., Mo.

CHOICE SHORTHORN BULLS FOR SALE!

13 Scotch and Scotch topped bulls of the low down, blocky type. One is a Cruickshank Orange Blossom, one a Ramsden. Also a few choice heifers not related to bulls. Address, PUNBY BROS., FAIRVIEW STOCK FARM, HARRIS, MO.

MT. VERNON HEREFORD FARM,

R. S. MAIRS, REGER, MO., Prop.

A great bargain for an early buyer, my Herd Bull, Sir Allwell No. 08723, a son of Corrector No. 49976, 1 sell him for no fault and will fully guarantee him in every respect, also coming yearling bulls for sale.

YOU CAN PREVENT BLACKLEG

among your cattle by the use of Parke, Davis & Co.'s BLACKLEG VACCINE. Every lot is tested on cattle and found reliable before a single dose is

Horseman.



The Terre Haute Association offers for its fall meeting September 24 to 28, 45,000 purses for 220 trotters and 218 pacers and four class races for purses of \$1,500 each. To all these entries will close on May 14. Write to Secretary Charles R. Duffin for entry blanks.

Horsemen will not fail to notice the advertisement of the Englishfield automatic check. We have seen this check used with best results. For horses that fight the bit, pull on one line, throw down their heads and break the checks, or are confirmed pullers, there is no check equal to it to break such habits. Write for circulars containing the statement of the best trainers to E. C. Englishfield, Berlin, Wis. You will be greatly interested in reading the circulars. They are sent free.

The breeders and owners of trotting and pacing horses looking for an opportunity to make entries should carefully read the advertisement of the Terre Haute Association in this issue. There are several things in favor of the Terre Haute Association. One is it has one of the best and fastest tracks in the country. Another is it has in W. P. Jams, President, and Charles R. Duffin, Secretary, two most accomplished officers, who will see justice administered impartially to all. No association has a better reputation for fair dealing than the Terre Haute. Read its programme and make arrangements to make the proper entries. The Matron Stake which it offers for foals of 1900 will close May 1st. This event calls for \$10,000 to be divided into three races, \$2,000 for two-year-olds trotters in 1902, \$2,000 for two-year-olds pacers in 1902, and \$2,000 for three-year-olds trotters in 1902. Under the conditions it will cost \$5 to nominate a mare on May 1, and after a payment of \$10 next December nothing more will be required until June 1 of the year of the race. If nominators do not intend starting their horses as two-year-olds, no payments will be required after next December until June, 1902. The Terre Haute Association offers a guaranteed purse of \$10,000 for the race that will be known as the Terre Haute Prize. This stake will be opened to all foals of last year, 1899, to trot as three-year-olds in 1902. The winner of this stake will receive \$7,500, the entire amount being distributed in one race. Under the conditions of this great event, nominations close on May 14. On that date an entrance fee of \$10 must be paid, after which no payments will be called for until May 12, 1902, the year of the race. For entry blanks to these stakes, write to Charles R. Duffin, secretary, Terre Haute, Ind.

WILKES, JR., RETURNS TO HIS MUTTON.
Editor RURAL WORLD: As I anticipated, Mambino, Jr., instead of meeting with argument my views on the question of carrying weight in races, ignored that subject entirely and opened his sewer of abuse and turned them in full force upon me. Because I expressed a fear, if I differed with him, that such would be the case, he calls me a "coward," and hesitates to "disgrace his pen with so truculent a foe."

I had no hesitation to meet him in argument, but as a mud-slinger I was aware of his great superiority. I did not want to cope with him in that line. I remembered the fable of the effort to get on a combat between the skunk and the lion, which the lion respectfully declined, saying if he conquered, it would only be a skunk that he had conquered, and after that all the beasts of the forest would know that he had condescended to fight with a skunk! For not getting into such a scrap the lion ought to be praised and not charged with cowardice any more than I should be for being reluctant to get into a contest with such an expert distributor of abuse as Mambino, Jr., is.

The gentleman admits he does not "argue" points, and says he is a physician, accustomed to "probe" into things, sound their "depths," diagnose the malady, etc. If he has not had better success in his "probes" with his patients, of sounding their "depths" than he has had with the horse papers he has administered to the community in which he practices medicine is to be pitied.

He boasts of the intellectual doses that he has supplied them with, and I am sorry to say with most fatal results to many of them! Only those with very strong constitutions were able to survive them. His "probes" seemed to reach the vital spot, and they soon succumbed. Of those that he has quoted as his patients let me quote from his article in last week's RURAL WORLD, viz.: "American Trotter," Independence, Iowa, dead as a herring; "Western Resources," Lincoln, Neb., very dead; "Western Breeder," St. Joseph, Mo., dead; "Breeder and Turfman," Nashville, Tenn., dead.

The other papers mentioned are still surviving, but some of them with constitutions very considerably shattered. Some of them say, as the marble slab in a graveyard records of a patient: "I was well, thought I would be better, took medicine and here I lie." It was Mambino, Jr.'s medicine that brought them "rest at last." There might be recorded on the slabs over their remains: "Died of too much Mambino Juniorism."

As Mambino, Jr., failed to notice the contention of my article that the present weight rule should be abolished it is needless to say more on this occasion. Jackson Co., Mo. WILKES, JR.

Horse Owners! Use GOMBAULT'S Caustic Balsam
The Safest, Best BLISTER over used. Take the use of all liniments for mild or severe cases. Removes Bunches or Blisters from Horses or Cattle. SUPPURES ALL CAUTERIES OR BRUISES. Cures all kinds of skin diseases. Every bottle sold is warranted to give satisfaction. Price \$1.00 per bottle. Write for descriptive circulars. The Lawrence Williams Co., Cleveland, O.

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Eureka Harness Oil

The finest preservative for leather ever discovered. Saves many times its cost by improved appearance and in the cost of repairs. Sold everywhere in cans—all sizes. Made by STANFORD OIL CO.

RED CHUTE, 2:24.

Attention is called to the advertisement of Red Chute, 2:24, 2666. It will be seen he was sired by Guy Wilkes, the sire of 55 trotters and six pacers in the list. Among his trotters were such performers as Fred Kohl, 2:26½; Hulda, 2:38½; Lesa Wilkes, 2:38; Muta Wilkes, 2:31; Hazel Wilkes, 2:31½; Mary Best, 2:32½; Venita Wilkes, 2:34; and scores of others of great speed. Guy Wilkes is full brother to William L., the sire of Axel, 2:22, that sold for \$106,000 to W. P. Jams, and others of Terre Haute, Indiana. He is also the sire of many other great trotters.

The dam of Red Chute, Baroness, is by a sire of equal greatness, Baron Wilkes, the sire of 6 trotters and 17 pacers in the list. He is considered by horsemen, one of our greatest sires. The second dam of Red Chute, Red Stocking, by Happy Medium, comes from another distinguished family. Happy Medium has sired extreme speed and is the sire of 8 trotters and six pacers in the list. The third dam is by American Star, the sire of the dams of many of our great trotters. With such breeding, Red Chute must prove a great sire. He is owned by W. W. Estill of the Elmwood Farm, on the Winchester Pike, five miles east of Lexington, Ky.

L. E. CLEMENT'S GOSPEL.

Editor RURAL WORLD: The "Horse Review" in its leading editorial makes the statement that the Year Book for 1899 has come to hand. It is surprised to find that Nutwood had surpassed Electioneer as a sire of standard performers, although it says: "It has been apparent for some time that Nutwood would ultimately surely displace Electioneer as the leading sire, but the best unofficial figures for last season gave him but six more performers, leaving him still second." I have figured from the unofficial lists and stated many number of times that Nutwood had already surpassed Electioneer as a sire of standard speed, and that he would soon lead all sires of sons that had sired standard speed and that within the next five years he would lead in all three of them, surpassing Electioneer as a sire of speed, Hambletonian as a sire of speed-siring sons and Blue Bull as a sire of speed-producing daughters. He is already the sire of dams that have produced more 2:15 performers than any other sire. It will be remembered that the 2:15 descendants of George Wilkes now number 68, Belmont, including Nutwood, 38; Electioneer, 18, and Woodford Mambino, 6. These figures again are taken from unofficial sources, but are approximately correct. There will be a decided gain of the three at least, while it will be impossible for the Wilkes family to gain as fast as they have done in the last five years. Some of the family will be as great favorites as they have been in the past, but as a family they will not make the advance that the other three will make. Electioneer should advance faster than either Belmont or the family of Woodford-Mambino. Of the two great sons of Mambino Chief, Woodford-Mambino and Mambino Patchen, the former will soon out rank the latter, from every standpoint, taking standard performers or extreme speed performers. There are still other factors that enter into the make-up of the American harness horse, that are now and always will be valuable. Shalable Guy, by Bobby, non-standard son of Blue Bull, is the youngest great dam. Carrie Blackwood, by Blue Bull, is the only mare with four in the 2:30 list by four different sires. Mary, by Flaxtail, has two each in the 2:15 list. Dixie, by Black Dick, has the lowest average for her three fastest performers. All of these are sources of extreme speed outside of the leading families of today. Carrie and Daisy Blackwood, by Blue Bull, are two full sisters that are breeding on through their daughters and Atlantic King, out of Carrie Blackwood, is the youngest of three sires that have two performers whose average is 2:06½. I shall be glad to receive and study the new Year Book, because it is these comparisons that show where and how we are advancing.

The "Review" says the Year Book shows that we gained 882 new standard trotters as against 847 in 1898 and 855 standard pacers as against 852 in 1898. This does not look as if we need to worry about the 2:30 trotter, being superseded by the 2:25 pacer. While the pacer costs less than the trotter to develop, there will be plenty of pacers developed, but we can take many of the horses that are now pacer and make any trotter not bred from American parentage look as insignificant as a mountain stream compared with the father of waters.

Columbus in the "Western Horseman" undertakes to correct my prejudices, as he is pleased to put it. If he will construct a table of descendants in the male line he will find that it is impossible to construct one that will not at the present time place Hambletonian first, Blue Bull second and Mambino Chief third. It is not strange that Mambino Chief, that was five years old when Hambletonian was born, and next to American Star was the first great nick with the sons of Hambletonian, should have daughters which have more descendants than any of the minor families. These descendants are counted in the male line for Hambletonian and his sons, and go to swell the great superiority of the major family. Yet in his own descendants, Blue Bull has more standard performers than Hambletonian and his daughters have produced more standard performers and more 2:15 performers than any other sire except Nutwood. It is too early to trace the descendants of Blue Bull mares. They are now where Mambino Chief and Bashaw mares were before one of Blue Bull's daughters was ever used for a brood mare. The daughters of his sons have produced 26 2:15 performers and in the future their value will be recognized, as the value of his own daughters is now being recognized. There is no one family that has all the good qualities, and we cannot afford to put away anything that we have yet

produced that is sound, but that which is imperfect will be cast off, and this will effect some of the fashionable families of to-day.

I am not given to making statements at random. I have seen the table compiled by the "Review" before I put it in print. Blue Bull's history as a progenitor only dates back to 1876, when his first colt, Neosho, or Blue Bull, Jr., was kept, and his first performer had not taken a standard record. This history of the Morgans and Black Hawks was being made before Mambino Chief or Hambletonian was foaled. I have seen a trotting race in which only the colt of American Star participated. Counting by what his dams have done, American Star would be one of the great minor families. Plot, Jr., was foaled the same year that Mambino Chief was, and through his daughters has been most prominent. Yet Kity Hayard, by his son Bayard, at one time held the world's record for a trotter on a half-mile track, and was a consistent performer.

I contend that Columbus, like many other writers of to-day, is prejudiced against or does not realize the greatness of the Blue Bull family. The family is by the records the second family and should be perpetuated. The family of Jim Wilson is handicapped by color (gray), but I think will in time rank ahead of his own sire as a progenitor. King Wilson is a wonderful sire of extreme speed. Will-tram was a consistent fast race horse, and we naturally look for him to sire extreme speed. I have never seen a stallion that showed as Jim Wilson did. He was a fast walker, a perfectly gaited trotter, a smooth pacer and could out single-foot any saddle horse I ever saw. Hal B. is an instance of successfully blending with other pacer families, and it is more than likely at the close of the year that her son and daughter will give this Blue Bull mare the first place as a producer of extreme speed. The average of her performers is now 2:06½.

THE LAST OF OZARK.

Editor RURAL WORLD: You failed to print a whole page of my last letter. I instructed that all be printed except the place you should have begun censorship was when I was gratuitously designated as a "ring lard roaster," whatever that refined expression may mean. If that remark had never been printed all would have been spared the personalities that followed. But why I should be cut off without a reply to the coarse and mendacious assaults on me, not only on the "Horseman" page, but on the "Horseman's" female department of the RURAL WORLD, after those assaults were permitted, cannot be explained satisfactorily to any fair-minded person. I suppose I will be permitted to say a few lines about Mr. Curl if I carefully compose them of milk and water. No, Mr. Curl, I have no little road stallion. I have a fine in-hand, pond standard and choicely bred stallion. I formerly owned a Clyde-sired stallion in Iowa, to accommodate my former neighbors who had real draft mares, and he was one of the best of his breed, but I gave him away, absolutely and without price. My conscience would not permit his perpetuation. I am sorry to say there are many there are still other factors that enter into the make-up of the American harness horse, that are now and always will be valuable. Shalable Guy, by Bobby, non-standard son of Blue Bull, is the youngest great dam. Carrie Blackwood, by Blue Bull, is the only mare with four in the 2:30 list by four different sires. Mary, by Flaxtail, has two each in the 2:15 list. Dixie, by Black Dick, has the lowest average for her three fastest performers. All of these are sources of extreme speed outside of the leading families of today. Carrie and Daisy Blackwood, by Blue Bull, are two full sisters that are breeding on through their daughters and Atlantic King, out of Carrie Blackwood, is the youngest of three sires that have two performers whose average is 2:06½. I shall be glad to receive and study the new Year Book, because it is these comparisons that show where and how we are advancing.

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Columbus in the "Western Horseman" undertakes to correct my prejudices, as he is pleased to put it. If he will construct a table of descendants in the male line he will find that it is impossible to construct one that will not at the present time place Hambletonian first, Blue Bull second and Mambino Chief third. It is not strange that Mambino Chief, that was five years old when Hambletonian was born, and next to American Star was the first great nick with the sons of Hambletonian, should have daughters which have more descendants than any of the minor families. These descendants are counted in the male line for Hambletonian and his sons, and go to swell the great superiority of the major family. Yet in his own descendants, Blue Bull has more standard performers than Hambletonian and his daughters have produced more standard performers and more 2:15 performers than any other sire except Nutwood. It is too early to trace the descendants of Blue Bull mares. They are now where Mambino Chief and Bashaw mares were before one of Blue Bull's daughters was ever used for a brood mare. The daughters of his sons have produced 26 2:15 performers and in the future their value will be recognized, as the value of his own daughters is now being recognized. There is no one family that has all the good qualities, and we cannot afford to put away anything that we have yet

produced that is sound, but that which is imperfect will be cast off, and this will effect some of the fashionable families of to-day.

I am not given to making statements at random. I have seen the table compiled by the "Review" before I put it in print. Blue Bull's history as a progenitor only dates back to 1876, when his first colt, Neosho, or Blue Bull, Jr., was kept, and his first performer had not taken a standard record. This history of the Morgans and Black Hawks was being made before Mambino Chief or Hambletonian was foaled. I have seen a trotting race in which only the colt of American Star participated. Counting by what his dams have done, American Star would be one of the great minor families. Plot, Jr., was foaled the same year that Mambino Chief was, and through his daughters has been most prominent. Yet Kity Hayard, by his son Bayard, at one time held the world's record for a trotter on a half-mile track, and was a consistent performer.

I contend that Columbus, like many other writers of to-day, is prejudiced against or does not realize the greatness of the Blue Bull family. The family is by the records the second family and should be perpetuated. The family of Jim Wilson is handicapped by color (gray), but I think will in time rank ahead of his own sire as a progenitor. King Wilson is a wonderful sire of extreme speed. Will-tram was a consistent fast race horse, and we naturally look for him to sire extreme speed. I have never seen a stallion that showed as Jim Wilson did. He was a fast walker, a perfectly gaited trotter, a smooth pacer and could out single-foot any saddle horse I ever saw. Hal B. is an instance of successfully blending with other pacer families, and it is more than likely at the close of the year that her son and daughter will give this Blue Bull mare the first place as a producer of extreme speed. The average of her performers is now 2:06½.

THE LAST OF OZARK.

Editor RURAL WORLD: You failed to print a whole page of my last letter. I instructed that all be printed except the place you should have begun censorship was when I was gratuitously designated as a "ring lard roaster," whatever that refined expression may mean. If that remark had never been printed all would have been spared the personalities that followed. But why I should be cut off without a reply to the coarse and mendacious assaults on me, not only on the "Horseman" page, but on the "Horseman's" female department of the RURAL WORLD, after those assaults were permitted, cannot be explained satisfactorily to any fair-minded person. I suppose I will be permitted to say a few lines about Mr. Curl if I carefully compose them of milk and water. No, Mr. Curl, I have no little road stallion. I have a fine in-hand, pond standard and choicely bred stallion. I formerly owned a Clyde-sired stallion in Iowa, to accommodate my former neighbors who had real draft mares, and he was one of the best of his breed, but I gave him away, absolutely and without price. My conscience would not permit his perpetuation. I am sorry to say there are many there are still other factors that enter into the make-up of the American harness horse, that are now and always will be valuable. Shalable Guy, by Bobby, non-standard son of Blue Bull, is the youngest great dam. Carrie Blackwood, by Blue Bull, is the only mare with four in the 2:30 list by four different sires. Mary, by Flaxtail, has two each in the 2:15 list. Dixie, by Black Dick, has the lowest average for her three fastest performers. All of these are sources of extreme speed outside of the leading families of today. Carrie and Daisy Blackwood, by Blue Bull, are two full sisters that are breeding on through their daughters and Atlantic King, out of Carrie Blackwood, is the youngest of three sires that have two performers whose average is 2:06½. I shall be glad to receive and study the new Year Book, because it is these comparisons that show where and how we are advancing.

The "Review" says the Year Book shows that we gained 882 new standard trotters as against 847 in 1898 and 855 standard pacers as against 852 in 1898. This does not look as if we need to worry about the 2:30 trotter, being superseded by the 2:25 pacer. While the pacer costs less than the trotter to develop, there will be plenty of pacers developed, but we can take many of the horses that are now pacer and make any trotter not bred from American parentage look as insignificant as a mountain stream compared with the father of waters.

TERRE HAUTE TROTTING AND FAIR ASSOCIATION

The Following Classes to be Decided at July Meeting, July 3, 4, 5 and 6

The Following Purses to be Decided at Fall Meeting, Sept. 24th to 29th

2:40 Class, Trotting.....	500	2:25 Class, Pacing.....	500
2:25 Class, Trotting.....	500	2:18 Class, Pacing.....	500
2:18 Class, Trotting.....	1,000	2:14 Class, Pacing.....	1,000
2:14 Class, Trotting.....	1,000	2:11 Class, Pacing.....	1,000
2:11 Class, Trotting.....	1,000	2:08 Class, Pacing.....	1,000

No. 1—The Wabash for 2:30 Trotters.....	\$5,000	No. 4—For 2:15 Class, Trotting.....	\$2,000
No. 2—The Wabash for 2:15 Pacers.....	5,000	No. 5—For 2:15 Class, Trotting.....	1,500
No. 3—The Wabash for 2:15 Pacers.....	5,000	No. 6—For 2:15 Class, Pacing.....	1,500

ENTRIES TO ALL CLASSES CLOSE MONDAY, JUNE 4.
CONDITIONS—All the above are regular class races. Entries close MONDAY, JUNE 4, 1900, five per cent, with five per cent, additional from winners. Customary duties of entry fee, \$2.50 and 10 per cent. Five to enter and three to start.

ENTRIES TO CLOSE MONDAY, MAY 14.
Entrance fee five per cent, payable as follows: Monday, May 14, one per cent; June 11, one per cent; July 16, one per cent; August 23, two per cent. Entries to close MONDAY, MAY 14, 1900, and must be accompanied by first installment of one per cent.
All horses must be eligible to the above classes at the date of closing, Monday, May 14, when horses must be named in purses 3, 4, 5 and 6. Five per cent, additional from money winners. All purses divided as follows: 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, 32nd, 33rd, 34th, 35th, 36th, 37th, 38th, 39th, 40th, 41st, 42nd, 43rd, 44th, 45th, 46th, 47th, 48th, 49th, 50th, 51st, 52nd, 53rd, 54th, 55th, 56th, 57th, 58th, 59th, 60th, 61st, 62nd, 63rd, 64th, 65th, 66th, 67th, 68th, 69th, 70th, 71st, 72nd, 73rd, 74th, 75th, 76th, 77th, 78th, 79th, 80th, 81st, 82nd, 83rd, 84th, 85th, 86th, 87th, 88th, 89th, 90th, 91st, 92nd, 93rd, 94th, 95th, 96th, 97th, 98th, 99th, 100th, 101st, 102nd, 103rd, 104th, 105th, 106th, 107th, 108th, 109th, 110th, 111th, 112th, 113th, 114th, 115th, 116th, 117th, 118th, 119th, 120th, 121st, 122nd, 123rd, 124th, 125th, 126th, 127th, 128th, 129th, 130th, 131st, 132nd, 133rd, 134th, 135th, 136th, 137th, 138th, 139th, 140th, 141st, 142nd, 143rd, 144th, 145th, 146th, 147th, 148th, 149th, 150th, 151st, 152nd, 153rd, 154th, 155th, 156th, 157th, 158th, 159th, 160th, 161st, 162nd, 163rd, 164th, 165th, 166th, 167th, 168th, 169th, 170th, 171st, 172nd, 173rd, 174th, 175th, 176th, 177th, 178th, 179th, 180th, 181st, 182nd, 183rd, 184th, 185th, 186th, 187th, 188th, 189th, 190th, 191st, 192nd, 193rd, 194th, 195th, 196th, 197th, 198th, 199th, 200th, 201st, 202nd, 203rd, 204th, 205th, 206th, 207th, 208th, 209th, 210th, 211st, 212nd, 213th, 214th, 215th, 216th, 217th, 218th, 219th, 220th, 221st, 222nd, 223rd, 224th, 225th, 226th, 227th, 228th, 229th, 230th, 231st, 232nd, 233rd, 234th, 235th, 236th, 237th, 238th, 239th, 240th, 241st, 242nd, 243rd, 244th, 245th, 246th, 247th, 248th, 249th, 250th, 251st, 252nd, 253rd, 254th, 255th, 256th, 257th, 258th, 259th, 260th, 261st, 262nd, 263rd, 264th, 265th, 266th, 267th, 268th, 269th, 270th, 271st, 272nd, 273rd, 274th, 275th, 276th, 277th, 278th, 279th, 280th, 281st, 282nd, 283rd, 284th, 285th, 286th, 287th, 288th, 289th, 290th, 291st, 292nd, 293rd, 294th, 295th, 296th, 297th, 298th, 299th, 300th, 301st, 302nd, 303rd, 304th, 305th, 306th, 307th, 308th, 309th, 310th, 311st, 312nd, 313th, 314th, 315th, 316th, 317th, 318th, 319th, 320th, 321st, 322nd, 323rd, 324th, 325th, 326th, 327th, 328th, 329th, 330th, 331st, 332nd, 333rd, 334th, 335th, 336th, 337th, 338th, 339th, 340th, 341st, 342nd, 343rd, 344th, 345th, 346th, 347th, 348th, 349th, 350th, 351st, 352nd, 353rd, 354th, 355th, 356th, 357th, 358th, 359th, 360th, 361st, 362nd, 363rd, 364th, 365th, 366th, 367th, 368th, 369th, 370th, 371st, 372nd, 373rd, 374th, 375th, 376th, 377th, 378th, 379th, 380th, 381st, 382nd, 383rd, 384th, 385th, 386th, 387th, 388th, 389th, 390th, 391st, 392nd, 393rd, 394th, 395th, 396th, 397th, 398th, 399th, 400th, 401st, 402nd, 403rd, 404th, 405th, 406th, 407th, 408th, 409th, 410th, 411st, 412nd, 413th, 414th, 415th, 416th, 417th, 418th, 419th, 420th, 421st, 422nd, 423rd, 424th, 425th, 426th, 427th, 428th, 429th, 430th, 431st, 432nd, 433rd, 434th, 435th, 436th, 437th, 438th, 439th, 440th, 441st, 442nd, 443rd, 444th, 445th, 446th, 447th, 448th, 449th, 450th, 451st, 452nd, 453rd, 454th, 455th, 456th, 457th, 458th, 459th, 460th, 461st, 462nd, 463rd, 464th, 465th, 466th, 467th, 468th, 469th, 470th, 471st, 472nd, 473rd, 474th, 475th, 476th, 477th, 478th, 479th, 480th, 481st, 482nd, 483rd, 484th, 485th, 486th, 487th, 488th, 489th, 490th, 491st, 492nd, 493rd, 494th, 495th, 496th, 497th, 498th, 499th, 500th, 501st, 502nd, 503rd, 504th, 505th, 506th, 507th, 508th, 509th, 510th, 511st, 512nd, 513th, 514th, 515th, 516th, 517th, 518th, 519th, 520th, 521st, 522nd, 523rd, 524th, 525th, 526th, 527th, 528th, 529th, 530th, 531st, 532nd, 533rd, 534th, 535th, 536th, 537th, 538th, 539th, 540th, 541st, 542nd, 543rd, 544th, 545th, 546th, 547th

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The Pig Pen.

CEREBRAL STAGGERS.

Editor RURAL WORLD: Will you

kindly tell me what is the matter with a

pig that I have on the hospital corps, and

also give a remedy? This is a pig of last

fall farrowing. Since early autumn he

has been fed on middlings and corn. Un-

til the time he commenced ailing he had

run at large with a number of others.

About the holidays he commenced stag-

gering and reeling whenever attempting

to move. He couldn't move in a straight

line or control his movements. For two

months past he has been fed on mid-

dlings, oat meal and milk with some po-

tatoes, raw, and some corn when the

weather was cold.

He grows, is strong, and fat enough for

a growing pig, but at present, though

able to go where he wants to with some

precision, he still puts in a big portion

of every day running in a circle, round

and round, for hours in a circle about

three feet in diameter. He can stop if

called to eat, but if let alone keeps cir-

cled lastly at it and is likely to give the

whole neighborhood the blind staggers

from sympathy. I think the same disease

has been in my herd before at different

times, as pigs or grown hogs have at

times been so stiff they could scarcely

move, others would shake as if with the

ague. A name for the trouble, its prob-

able cause and directions as to the remedy

would be thankfully received. J. S. B.

Alta Vista, Kan.

Dr. T. E. White replies as follows:

When a hog, or any other animal, walks

in a circle it indicates brain trouble.

From the peculiar nervous actions you

describe and from the fact that the dis-

ease is more or less in your herd it would

not be surprising if physical and post-

mortem examinations were made of those

that are sick to find the herd infected

with trichina spiralis. Measles in the hog is

due to tape worms; they are occasionally

found in the brains of hogs. If located in

one or other of the hemispheres of the

brain the animal walks in a circle. If

the worm-cysticercus cellulosa, or tape

worm—is in the eye, that eye goes blind.

Often times the worm may be found em-

bedded in the frenum of the tongue. If

your hogs are infested with trichina, it

like the tape worm, will permeate the en-

tire animal economy. Examination ought

to be made, for if either one or the other

of the maladies is affecting your hogs,

you ought to know it. I would advise, if

the pig dies, to take the head to your

family physician and have the brain ex-

amined.

KIDNEY WORMS IN HOGS.

Editor RURAL WORLD: In your issue

of March 21, I read the inquiry regarding

kidney worms in hogs and the answer

by Dr. T. E. White. His remedy is very

good, but what is the use of ironing a

hog's back with a flat iron? The follow-

ing remedy is speedy and certain. To a

hog weighing 100 pounds or more, give

one teaspoonful of arsenic washed down

with cold water once every day for three

days, then every other or third day until

the hog is well. Keep the hogs in a dry

place and protect them from rains or

snows. J. M. THOMPSON, M. D.

Linn Co., Mo.

Dr. White says in reply that the "flat

iron" treatment was not prescribed for

kidney worms, but to cure a sprained

poas muscle (anterior lumbar muscle),

this being the trouble rather than kidney

worms, as was supposed.

CARE OF THE PIGS FROM MATING

THE SOW TILL SOLD.

The proper care of the pigs should be

begin prior to mating the dam. If the sow

is not in proper condition when she is

bred, we can't expect best results with

her produce. During the summer and

fall seasons she should have plenty of

range and access to succulent feeds. Be-

sides this she should be fed a fair ra-

tion of some rather light and bulky

feed, such as oats and milk feeds, with

a little corn and plenty of pure water.

A few weeks before breeding, the feed

should be slightly increased, so the sow

will be in strong, robust condition at

time of mating. After sow is bred, con-

tinue the care as before. With aged sows

I am a great believer in bulky feeds, such

as bran and shorts, with a little oil meal

added. This course of feeding animals

very well for younger sows, also, writes

O. H. Smeby, Jr., in "American Swine-

herd."

Do not allow too many sows to sleep

together; the fewer the better. With

only a few, and very valuable sows in

herd, a lot and house for each sow is

best. When sows are thus cared for,

there is seldom any difficulty attending

farrowing, and pigs are born strong and

active, looking like they were several

days old, sometimes. For two or three

days after farrowing, the sow should be

fed hardy anything except warm water,

slightly salted, after which gradually

resume the feed as before. The feed

should be increased until the pigs are

large enough to stand an increased supply

of milk from their dam, when her feed

should be increased accordingly until

she gets all she will eat up clean.

I know breeders who are afraid to give their sows slop made from mill feeds and other light laxative feeds, lest the pigs get the scours. I think this is a mistake, as the pigs will scour from too rich feed as well as from the opposite. Feed a well-balanced ration, and as nearly as possible the same after as before farrow. I shall not touch upon the various ailments that little pigs are liable to; will only say they can be largely prevented by proper and judicious care and handling of dam.

When pigs are about four weeks old, they will begin to look for additional feed, which should then be provided for them in shallow troughs, placed where they can enjoy their feed undisturbed by the sow.

Skim milk, shorts, oats and corn are all suitable for piggy from now on. When pigs are about three months old they should be weaned, which they will practically do themselves if properly cared for. They should from now on be fed about all they will eat up clean of the feeds indicated above. In connection with grain and skim milk, pigs should have plenty of range and good pasture whenever practicable.

Pigs cared for and reared as outlined above, develop into strong, healthy and vigorous fellows, which give universal satisfaction to buyer. Pigs so handled are almost invariably sure and prolific breeders. Most of the aged sows in my herd have rather too large litters than too small. Have four or five that have farrowed up to date, and the average forty-four pigs, which is more than they can feed.

J. S. B.

Alta Vista, Kan.

Dr. T. E. White replies as follows:

"I have two acres of rye adjoining the hog pasture which I had some idea of sowing to rye. Would you sow the rape and cut the crop, or would you just pasture it all? When and how would you put it in? How much seed per acre? The land is a timber soil and was in corn last season. How long should it grow before being pastured? A few hints on this subject would oblige me very much and doubtless many others."

The foregoing are questions asked of "Wallace's Farmer," which replies as follows:

The rape might be sown as soon as the ground is fit to work, at the rate of three pounds per acre and harrowed in, provided the rye is drilled. However, if our correspondent has plenty of hog pasture we believe we would let the rye stand and take a crop, and immediately after harvest would plow, disk it thoroughly, and sow the rape at the rate of three pounds of seed to the acre. Or he might take it into the hog pasture, let the hogs eat it down, then plow, and sow about the first of July. Which of these methods he should choose will depend on circumstances of which we are not advised. If he has plenty of hog pasture without it he may as well take that crop of rye. If he has not, he can enclose it with his hog pasture and pasture the rye in addition. What the hogs do not eat before, they will finish up as soon as it is in the dough stage. The only objection to delaying the sowing of the rape until after the rye is removed in some way, would be the uncertainty of having sufficient moisture to secure a stand. After the rape is sown it can be turned on in four or five weeks, say when it is eight or ten inches high, or earlier if circumstances demand it.

J. M. THOMPSON, M. D.

300 VS.

